REPORT TO THE LEGISLATURE

STUDY OF ELECTRICITY TAXATION

WASHINGTON STATE DEPARTMENT OF REVENUE
FREDERICK C. KIGA, DIRECTOR
DECEMBER 1, 1999

December 1, 1999

TO: The Honorable Lisa Brown, Chair
Senate Energy, Technology, and Telecommunications Committee
The Honorable Larry Crouse, Co-Chair
The Honorable Erik Poulsen, Co Chair
House Technology, Telecommunications, and Energy Committee

FROM: Frederick C. Kiga, Director
Department of Revenue

I am pleased to present to you the Department of Revenue's study of the taxation of the electricity industry. This report is submitted pursuant to Section 138 of Chapter 309, Laws of 1999, which directs the Department to conduct a study and report the results to the Legislature. We will be distributing a copy of the report to each member of your committee.

The report begins with a comprehensive picture of current state and local taxes paid by the electricity industry. Then, the study evaluates the impacts on those tax revenues in light of trends and changes occurring in the industry. Next, the study looks to the possible effects of Washington taxes on interstate and intrastate competition and economic development within the industry. These portions of the report could not have been prepared without the invaluable contribution of the electricity industry and consumers who rely upon electricity in their business.

The final chapter offers to the Legislature various taxing options. We hope the options and the framework for analysis of the options are useful to you in your deliberations. Two points to be emphasized about the options are that the Department makes no recommendations on any option and the options do not reflect consensus among the industry members participating in the study.

The study team preparing this report was lead by Anne Solwick of our Legislation and Policy Division. If you have any questions or want additional copies of this report, she can be reached at (360) 586-0332 or by e-mail at annes@dor.wa.gov.

cc: The Honorable Gary Locke, Governor

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Executive Summary

The Legislature directed the Department of Revenue to study and report on the taxation of the electricity industry. The need for this study arose out of the federal deregulation of the electricity wholesale market that changed and continues to change the manner in which this industry functions. Federal deregulation created a very active wholesale market in which electricity is traded by new entities such as electricity marketers regulated by FERC (Federal Energy Regulatory Commission) as well as the existing electricity service providers. Additionally, in Washington, the option exists for large users of electricity to pressure their local electricity provider to obtain for them lower-priced electricity or to fashion a method for leaving the local system altogether for the opportunity of better prices. While local electricity service providers may be chafing under this pressure, conversely, they are finding new business opportunities to sell electricity to out-of-state customers because of deregulation of the retail market enacted in other states.

The question is whether current state and local tax codes efficiently and effectively operate in this new and changing environment. In order to answer that question the Legislature directed the Department to analyze the taxes paid currently by the electricity industry, to analyze trends in the electricity industry and how those trends may affect tax revenues, and to analyze whether current tax law equitably responds to this new environment. And finally, the Department was asked to present taxation options. These options are not recommendations; nor do they represent a consensus in the industry.

I. Overview of Washington's Tax System

Washington taxes the privilege of doing business in this state through its gross receipts taxes on businesses. Depending upon the activity generating the income, gross receipts of regulated utilities are subject either to the business and occupation tax or to the public utility tax. In 1998 the light and power businesses paid $130,224,376 in public utility taxes and $5,183,665 in business and occupation taxes. These tax revenues are deposited into the state General Fund.

In addition to taxing the privilege of doing business in Washington, the state also asserts a sales or use tax on purchases made by consumers. While electricity itself is not subject to retail sales and use taxes, electricity service providers themselves pay sales and use taxes on items consumed. Because the sales tax is remitted to the Department of Revenue by the vendor along with all its other retail sales tax collections, the total amount of sales and use tax paid by the electricity service provides is unknown.

Another excise privilege tax, the public utility district privilege tax which is commonly referred to as a tax paid in lieu of property tax, is asserted against public utilities districts. Tax revenues from this tax were $27,514,474 in 1998. Approximately 45% of these revenues is deposited into the state General Fund and 55% is distributed to the local taxing jurisdictions.

Washington also taxes privately owned real and personal property. Many of the electricity service providers in this state are not privately owned so therefore do not pay property tax. Those who are privately owned paid $46,720,368 in property taxes in 1997. This amount is allocated approximately 25.8% to the state General Fund for education and 74.2% to the local taxing jurisdictions.

Local taxing jurisdictions have the authority to impose taxes. Some cities tax the gross receipts of electricity service providers. In 1997, cities collected $104,244,169 in tax revenues from electricity service providers. Additionally, cities, counties, and other taxing jurisdictions may impose local option sales taxes on consumables purchased by electricity businesses.

All these taxes, plus a few generally applicable taxes are discussed in detail in Chapter 3. This chapter analyzes the taxes paid by the electricity industry and collected by the Department of Revenue or by local taxing jurisdictions. For each tax analysis the incident giving rise to the tax is explained as is the measure of tax or tax base. Also described is how the tax is collected and where the collected revenues are deposited.

II. Overview of the Electricity Industry Taxpayers in Washington

Seventy-eight businesses fall within the definition of a light and power business and are thereby subject to the state public utility tax. The primary business function of some of these businesses is to provide electricity service. This group includes a mix of investor-owned utilities, mutuals, cooperatives, municipally-owned service providers, and public utility districts. Other businesses whose primary business function is not to provide electricity service nevertheless fall within the definition of a light and power business. They are subject to the public utility tax chapter for those gross receipts earned from the sale or distribution of electricity; these businesses include port, water, and irrigation districts. Three other entities meet the definition of a light and power business but generally do not incur public utility tax liability. These include the Bonneville Power Administration, Energy Northwest (formerly Washington Public Power Supply System [WPPSS]), and four independent power producers. The Bonneville Power Administration is not subject to tax because it is a federal entity. The latter two entities generally incur no public utility tax liability because of a deduction from public utility tax for sales of electricity for resale made between light and power businesses.

Certain other businesses that do not meet the definition of a light and power business but are affected by the taxation of electricity are also considered in this report. These other businesses include power marketers whose gross receipts are taxed under the business and occupation tax, the direct service industries that purchase electricity at a price free of embedded Washington State taxes directly from Bonneville Power or from other electricity providers who transmit electricity on Bonneville Power lines, and those other large industries who are significantly dependent upon electricity to operate their business.

No overview of the taxation of electricity would be complete without consideration of the consumer. While the taxes associated with electricity are not directly imposed upon consumers (except for the option to directly impose on the consumer one local tax), the taxes paid by the electricity industry are passed on to the consumers in the rates charged to them. Since residential consumers pay the highest rates per kilowatt for electricity service, residential consumers bear the greatest proportionate tax burden.

III. The New and Changing Environment - Trends

The Department was asked to analyze trends in the electricity market and how those trends may affect revenue streams. This analysis begins with a baseline revenue forecast based upon the

Northwest Power Planning Council's medium forecasts for electricity prices and demand growth. The baseline revenue forecast shows no significant changes in prices or demand. The forecast includes projections for high, medium, and low prices.

Only one trend shows a significant potential for lost revenues. That trend is open market access for Washington consumers. The *potential* state and local revenue loss ranges from $5 million to $20 million in the year 2000 depending upon whether the low or high price projection is used and depending further upon the number of consumers who leave their local provider. The *potential* is not a forecast; it shows the plausible range of revenue impact provided certain possibilities occur. This potential loss is built upon various assumptions. One critical

assumption is that the consumers who leave their local provider, purchase their electricity from an out-of-state provider that does not pay Washington State taxes because of lack of nexus. The possibility for an out-of-state seller of electricity to avoid taxes in this state may be contingent upon its ability to avoid a contractual relationship with the local deliverer of the electricity.

Other trends identified during the course of the study show small tax impacts of either a gain or loss. The other trends include the following:

- New electricity-related services offered by the local provider or a new entity.
- Shifts in the performance of current services from the local provider to a new entity.
- Possible changes with respect to generation and transmission.

IV. Influence of the Tax Code – Tax Equity

In addition to concerns about tax revenues, the authorizing legislation questioned whether current tax law equitably responds to the changing electricity industry environment. To address this question the study team analyzed various scenarios depicting sales transactions. Each scenario compares the transaction on a tax-per-kilowatt-hour comparison.

Washington State's light and power businesses are taxed similarly to each other when selling to industrial customers. Taxes represent only about 10 percent of the total variation in prices when comparing average prices by entity type. Thus taxes alone to do not cause serious competitive disadvantages among in-state entities.

Since residential prices vary considerably, the tax on electricity sold to residential customers can vary considerably. This is because the public utility tax and the public utility district privilege tax, which are based on the value of electricity sold, constitute a large percent of the total tax burden.

When light and power businesses compete for out-of-state consumers they do not suffer significant disadvantages from state taxes because of the deduction for electricity sold out of state for resale or consumption out of state. However, there are two exceptions to this general conclusion. Some cities impose a city utility tax on gross receipts without deduction for exported power; under this circumstance the in-state business suffers a competitive disadvantage. The second circumstance of competitive disadvantage occurs when a public utility district sells self-generated power. Such power is subject to an additional privilege tax.

When an in-state light and power business is competing for in-state consumers with an out-of-state seller that does not pay taxes in Washington, the in-state light and power business suffers a serious competitive disadvantage. The disadvantage can range from 1 to 11.4 percent of gross sales.

Another competitive disadvantage occurs when a sale for resale is made to different Washington entities. In-state marketers face a competitive disadvantage, assuming the public utility tax is included in the price of electricity sold to them by the light and power business. This is because a sale for resale made to another light and power business is not subject to the public utility tax but a sale made to a non-light and power business is.

V. Options for Taxation

The authorizing legislation asked the Department to offer options for taxation changes that would avoid revenue loss, promote competitive neutrality, and encourage economic development within the electricity industry. The various options considered are grouped into four broad tax structure categories. Those categories are:

- A business activity tax.
- A consumption tax.
- Public purpose taxes that are compatible with either structure.
- A business activity/consumption tax combination.

Each structure could be based on value, such as gross receipts, or volume, such as kilowatt hours. Further, each structure allows for variations to accommodate policy issues.

The four structures are analyzed according to the criteria established in the authorizing legislation and according to basic tax administration criteria. This analysis is summarized in the chart below. No structure emerges as meeting all the criteria.

A checkmark indicates that the option allows a range of possibilities for meeting the indicated criterion. An "X" in a column indicates that the option is less successful in meeting the criterion.

Options Matrix

	Revenue Loss	Competitive Neutral	Economic Develop	Broad Base	Stable	Ease of Compliance (TP)	Ease of Compliance (GOV)
Business Activity based	☒	☒	☒	☒	☒	☑	☑
Consumption based	☒	☑	☑	☒	☑	☒	☑
Public Purposes	☑	☒	☒	☑	☒	☒	☒
Business/ Consumption	☑	☑	☑	☑	☑	☒	☒

CHAPTER 1
INTRODUCTION

1.1 Background

Over the last two years, the Washington State Legislature considered nearly a dozen measures that would have altered the state laws governing the business of providing electricity to consumers. Many of these proposals were designed for a discrete purpose. Others would have been more sweeping in their effect and would have fundamentally changed the manner in which state government defines and regulates electricity producers and service providers.

All of the proposals were initiated in the context of change within the electricity industry itself. Federal law changes since 1992 deregulated the electricity wholesale market and set in motion tremendous changes in the electricity industry.[1] Local-access restructuring, enacted in different forms by approximately one-third of the states, continues to transform the industry.

1.2 Legislative Assignment

In this context, the Department of Revenue was asked to produce information that could provide a reference point for policymakers to weigh competing proposals. Concerned whether the state's tax laws are adequate for the changing industry landscape, the Legislature authorized the Department of Revenue to conduct this study of the taxation of the electricity industry. Section 138 of Engrossed Substitute Senate Bill (ESSB) 5180 directed the Department to conduct a study and prepare a report of current state and local taxation of the electricity industry. The Department was directed to offer taxation options to avoid revenue loss, promote competitive neutrality, and encourage economic development within the electricity industry.

Study Team. The legislation directed support to the Department of Revenue by the Energy Division of the Department of Community, Trade, and Economic Development, the Utilities and Transportation Commission, and the Office of the State Auditor. Representatives from each agency or commission formed the study team.

Participants. In order to meet the legislative requirement of consultation with participants in the electricity industry and with electricity customers, the Department of Revenue held several public meetings. Invitation to the first meeting, held on June 30 in Seattle, was sent to a mailing list of two hundred and sixty-five people. The mailing list was comprised of participants in the *Washington State Electricity System Study* (the 6560 study)[2], the *Washington Electric Utility Service Quality, Reliability, Disclosure and Cost report* (the 2831 study)[3], light and power businesses paying the state's public utility tax, and interested persons who requested to be on the mailing list. Sixty people attended that first meeting. Later, a small group of industry people assembled to act as a Technical Advisory Committee to the study team. The members of the

[1] The Energy Policy Act – 1992; FERC Rule 888 – 1996; and FERC Rule 889 – 1996.
[2] *Washington State Electricity System Study*, submitted to the Washington State Legislature by the Washington Utilities and Transportation Commission and the Washington Department of Community, Trade and Economic Development, in compliance with ESSB 6560, (December 31, 1998).
[3] *Washington Electric Utility Service Quality, Reliability, Disclosure and Cost Report*, submitted to the Washington State Legislature by the Washington Utilities and Transportation Commission and the Office of the State Auditor, in compliance with ESHB 2831, (December 1, 1998).

Technical Advisory Committee met with the Department of Revenue study team in Olympia and made themselves available for consultation throughout the study.

Additionally, the Department has maintained a study website. Postings at the site included working drafts of the study methodology and drafts of the report. From the website, visitors could also e-mail the study team directly. Throughout the course of the study, the website provided up-to-date information to the public as well as a continuous avenue of communication.

1.3 Data Sources

In addition to consultation with industry, the study team relied upon data supplied by the participants; on publicly available federal, state, and local data; on privately published papers and documents; and on confidential taxpayer information held by the Department. When confidential taxpayer information was used in this report, the secrecy requirements of the Revised Code of Washington (RCW) 82.32.330 were strictly followed in order to ensure taxpayer privacy.

Unless otherwise noted, all the data shown in the tables of this report are based on taxpayer information compiled by the Department of Revenue.

1.4 Summary of Report Organization

The legislation required the Department to complete the following:

- Analyze the current taxation of the electricity industry;
- Identify trends in the industry and measure the effect of those trends on future state revenues;
- Measure whether the tax code imposes inequitable tax obligations by taxing similarly situated businesses differently; and
- Present options for taxation of the electricity industry.

To meet these requirements this report includes the following chapters:

- Chapter 2: Brief Overview of Washington State Taxes. This chapter briefly describes the tax system in general, defines some tax terms, and addresses certain issues specific to taxation of the electricity industry.
- Chapter 3: Current Taxation of the Electricity Industry. This chapter analyses each significant tax paid by the electricity industry by customer class, by activity, and by category of entity.
- Chapter 4: Trends in the Electricity Industry. This chapter looks at the potential impact to state revenues due to various trends in the industry. The chapter describes how those trends were identified and how the trends were analyzed to measure possible revenue gain or loss.
- Chapter 5: Tax Equity. This chapter describes the methodology used to measure possible inequities in the tax system and analyzes the resulting data.
- Chapter 6: Options. This chapter offers to the Legislature various taxing options and how those options address revenue stream issues and tax equity issues. Additionally, the chapter includes policy issues raised by the study team and by the participants.

CHAPTER 2
A BRIEF OVERVIEW OF WASHINGTON TAXES

2.1 State Taxes

The Washington State tax revenue system relies primarily on property taxes and excise taxes. Both types of taxes are imposed upon the electricity industry. Specific information such as the incidence, rate, measure, collection, and allocation of each pertinent tax is presented in Chapter 3. This chapter provides a general overview of Washington's tax system.

Property Tax. The Washington State Constitution requires that all property be uniformly taxed. However, some property is exempt from tax. For example, property owned by a political subdivision of the state is not subject to property taxation. Dams, fuel burning generation plants, and wires and poles owned by municipally owned light and power businesses, public utility districts, irrigation districts, and water and sewer districts are not subject to property tax. Nor is the property tax imposed on federally owned property.

Property subject to tax may be locally assessed or centrally assessed. Property is locally assessed, meaning it is valued and assessed by the local county assessor, unless the property is "utility" property[4] with real property, wires, poles, and other infrastructure located in more than one county. Utility property located in more than one county is centrally assessed by the Department of Revenue. Although the central assessments are annually performed by the Department of Revenue, the assessments are certified to the counties in which the property is located and taxes are collected in the same manner as all other property in the county. Many vertically integrated electricity providers are centrally assessed.[5]

Excise Taxes. The state's excise taxes most pertinent to this study include the business and occupation tax (B&O tax), sales and use taxes, the public utility tax, and the PUD privilege tax.

B&O Tax. The B&O tax is imposed on the privilege of conducting business in this state. It is an activity-based tax. That is, persons doing business in Washington are subject to a tax on revenues from the conduct of various activities such as making retail or wholesale sales, manufacturing, or providing services. The B&O tax is imposed on the gross receipts of a business with no deductions or exemptions except for those specifically allowed by law. Further, the B&O tax is a pyramiding tax. It may be asserted on the manufacture of a product, asserted again if the product is sold at wholesale, and asserted again when the product is sold at retail. While the economic burden of the tax may pass on to the consumer, the obligation to pay the tax rests upon the business.

Public Utility Tax. The public utility tax (PUT) is paid in lieu of the B&O tax[6] by certain regulated or public service businesses such as a business that sells electricity. Unlike the B&O tax, the PUT does not pyramid. It is to be applied once to the gross revenues received from providing electricity service. Even though some light and power businesses show the PUT as a

[4] Chapter 84.12, Assessment and Taxation of Public Utilities.
[5] A vertically integrated electricity provider is one that owns the generation facilities and distribution infrastructure and often the transmission as well.
[6] RCW 82.04.310 exempts certain businesses defined in Chapter 82.16, Public Utility Tax, from the B&O tax when gross revenues are subject to the PUT.

line item on the bill submitted to the customer, the PUT, similar to the B&O tax, is a tax obligation of the business. "Light and power business" is the phrase used to describe electric utilities in the excise tax code.[7] The term will be used throughout this report to identify those businesses falling within the statutory definition.

PUD Privilege Tax. This tax is imposed upon public utility districts only. The PUD privilege tax is an excise tax but is often referred to an "in lieu of property tax." That is, because public utility districts do not pay property tax and the privilege tax is intended to compensate for lost property tax revenues that would be imposed if the property were privately owned. The tax is based upon a relatively complex computation of gross revenues and the value of kilowatt-hours generated.

Sales and Use Tax. The sales tax is imposed on the retail purchase of goods and some services. The use tax is imposed on the use of the same goods and services when sales tax has not been paid previously. The obligation to pay sales tax rests on the consumer although the seller generally will collect the tax and remit it to the state. When a light and power business purchases goods or services it will consume or use itself, such as computers, a telephone system, or vehicles, it must pay the sales or use tax on the purchase price or value of those products unless a specific exemption applies. Sales of electricity are not subject to the sales and use tax.

2.2 Brief Overview of Local Taxes

The Legislature has granted to cities and counties the specific authority to impose local taxes. The local taxes applicable to the electricity industry are the local public utility tax and the city and county sales tax. Additionally, a variety of sales tax options are authorized; some are available only in specific localities while others are available to any taxing jurisdiction.

Local B&O Tax. Cities have the authority to impose a business privilege tax. While the tax is not currently imposed on sales of electricity to consumers, it may be imposed on such activities as retail sales of appliances by a light and power business.

Local Public Utility Tax. Cities have the authority to impose a business privilege tax of up to 6 percent on electricity providers (and other utilities) without voter approval. An amount greater than 6 percent may be imposed by a vote of the people.[8]

Local Sales and Use Tax. Cities and counties may impose sales and use taxes. If such taxes are imposed they apply to goods and services purchased or consumed by electricity businesses located within their jurisdiction. These local taxes are collected along with the state portion of the sales tax by the sellers and later distributed back to the city or county by the Department of Revenue. Sales of electricity are not subject to sales or use tax.

Compensatory Payments. Two municipally owned light and power businesses, Tacoma Public Utilities and Seattle City Light, own and operate generation facilities located in counties other than the county in which the municipality is located. By permissive statute and by negotiations, Tacoma and Seattle make payments to the counties in which the generation facility is located.[9]

[7] "Light and power business" means the business of operating a plant or system for the generation, production or distribution of electrical energy for hire or sale and/or for the wheeling of electricity for others. RCW 82.16.010(5).
[8] RCW 35.21.870.
[9] RCW 35.21.420, .422, .425.

These payments are not taxes. Nevertheless, in the chapter that follows, the payments are described in more detail and the amount of payment made is shown in order to present a complete picture of the full statutory burden imposed upon light and power businesses.

2.3 Tax Terms

Throughout this report certain terms denoting tax characteristics are used. Definitions for those terms are as follows:

Incidence of tax. The transaction or activity that triggers a tax. The incidence of tax identifies who bears the legal obligation to pay the tax.

Measure of tax. The amount subject to tax. The measure of tax may be value-based such as gross receipts. Or, the measure of tax may be volume-based such as weight or frequency. The tax measure is also commonly referred to as the tax base.

Tax rate. The percentage applied to the measure of tax. The measure of tax multiplied by the tax rate equals the tax due.

Collection of tax. Some taxes, such as the B&O and PUT are self-computed and remitted by the taxpayer. Property taxes are computed by county or state officials with bills submitted to the taxpayer. On the other hand, sales taxes are computed and collected by the seller and later remitted to the Department of Revenue. The purchaser voluntarily computes and remits to the Department use taxes due.

2.4 Classification of Electricity

Washington State is counted among the states in which the provision of electricity is a service.[10] Some states consider the sale of electricity to be a sale of tangible personal property and thereby a retail sale when sold to an end-use consumer.

This distinction is important in Washington's excise tax system. When a taxable transaction involves tangible personal property, certain taxing conventions follow unless specific exemptions apply. Those conventions are:

- A sale to the end-user of tangible personal property is a *retail* sale for B&O tax purposes and is subject to *retail sales tax*.
- *Manufacturers* produce tangible personal property.
- Manufacturers are eligible for various *tax exemptions and deferrals* such as the sales tax exemption for manufacturing machinery and equipment and tax deferrals for research and development projects.

[10] Tenaska Washington Partners, LPII v. Department of Revenue, Thurston County Superior Court, Case No. 94-2-02601-9 (1994). The holding of this case sustains that electricity is not tangible personal property. In Washington tax law, an activity that does not entail tangible personal property is a service unless statute proscribes otherwise. With respect to electricity, only the public utility tax chapter proscribes taxation of electricity under specific circumstances. Absent those specific circumstances, transactions involving electricity are taxed under the service B&O tax category.

Since electricity is not tangible personal property in Washington, none of these conventions are applicable to transactions involving electricity. Retail sales tax is not imposed and the exemptions and deferrals available for manufacturers of tangible personal property do not apply. Instead, a transaction involving electricity is subject to the public utility tax or the service B&O tax.[11]

Another area in which the distinction of electricity provision as a service is significant concerns Washington law applicable to interstate transactions. Washington treats an interstate sale of tangible personal property as taxable to the state of delivery on the full value of the property sold if the sale is taxable in the delivery state at all (see the discussion below about nexus). In contrast, taxes due on the interstate provision of a service may be apportioned between the states or taxable to a single state.

Under current Washington law, a light and power business providing electricity for resale or consumption outside the state is statutorily allowed a deduction for the gross receipts of the sale[12] so no apportionment is necessary. On the other hand, electricity provided by a non-light and power business, such as a marketer, to an out-of-state purchaser is subject to service B&O tax and the gross receipts may be apportioned under the general Washington apportionment rules.

2.5 Nexus

The above general principles apply only if the out-of-state business has nexus with Washington. A person has "nexus" if the activities conducted in Washington by an out-of-state business are significantly associated with the business' ability to establish and maintain a market in this state.[13] Absent nexus, the out-of-state provision of a service by a business located outside our state to an in-state person is not subject to Washington tax.

Statutory provisions have been adopted by some of the restructuring states in the hope of avoiding loss of revenue due to nexus problems with out-of-state sellers of electricity. These provisions typically involve either the requirement that the out-of-state seller maintains an office in the state and/or that the seller registers with the utilities commission. In some states, as a condition of registering with the commission, the seller must agree to pay all state and local taxes. To date, the constitutionality of these nexus schemes has not been challenged in court. However, the lack of lawsuits to date should not be interpreted to mean the statutory provisions would ultimately withstand a constitutional challenge.

Paull Mines, counsel for the Multistate Tax Commission, feels statutory nexus provisions may not be necessary. He contends that if the out-of-state seller must contract with an in-state distributor to effect delivery of the electricity, the contractual relationship allows the seller to

[11] The PUT does not apply to transactions incidental to the public utility activity or with a customer who does not yet receive utility service. WAC 458-20-179(4). Additionally, B&O rather than PUT applies to electricity transactions conducted by marketers rather than a "light and power business."
[12] RCW 82.16.050(9).
[13] Tyler Pipe Industries, Inc. v. Washington Sate Department of Revenue, 483 US 232, 250-251 (1987). As a caveat: The citation concerns B&O tax. The law with respect to nexus for sales and use tax while similar follows another line of cases.

establish and maintain a presence in the state sufficient to establish nexus.[14] In the event Washington restructures, the Legislature may wish to consider Mr. Mines' analysis.

However, under the current situation in Washington, Mr. Mines' analysis is not applicable. Right now, the consumers who are receiving electricity from out-of-state suppliers own their own transmission and distribution system or use the system owned by Bonneville Power Administration. Neither situation creates the link necessary to establish nexus under the contractual relationship theory.

2.6 Changes in the Electricity Market and Sales of Electricity for Resale

An active wholesale electricity market resulted from federal deregulation. New participants have entered the field. Previously, only light and power businesses were trading electricity. Now, entities who do not meet the definition of a "light and power business" for public utility tax purposes, are purchasing and selling electricity for resale inside and outside of Washington. Not only is the market more active but the traded electricity may now include packaging of services not previously attached to a sale of electricity for resale. The new packaging may consist of financing options or service-type options such as the option to "park" purchased but unsold electricity for a period of time.

Activity in the market may occur in many different forms. One form of electricity trading is the speculative buying and selling of contracts for future delivery. In such trading, the purchaser generally has no intent to actually take delivery of the electricity. The intent in these agreements is similar to those who invest in other types of futures trading: to hedge against risk and/or to profit from the trade of the contract.

Another form of electricity trading is the buying and selling of the electricity. The electricity may or may not be packaged with other services or options. The same electricity may change hands several times between several different types of businesses before it ultimately is sold to the end user.

Prior to the deregulation of the wholesale electricity market, non-light and power businesses were not engaging in sales or trade agreements concerning electricity. Now, both light and power businesses and non-light and power businesses engage in these types of trading activities. Any business dealing in electricity, such as a marketer, but not meeting the definition of a "light and power business" is subject to the B&O tax.[15] Light and power businesses are generally subject to the PUT.

There are several deductions from the PUT available for light and power businesses. For example, there is a deduction for "amounts derived from the sale of commodities to persons in the same public service business as the seller, for resale as such within this state."[16] Another deduction is for "amounts derived from the production, sale, or transfer of electricity for consumption outside the state."[17] Neither of these deductions is available to a non-light and

[14] Mines, Paull, *Conversations With Professor Hellerstein: Electronic Commerce and Nexus Propel Sales and Use Tax Reform*, publication pending
[15] RCW 82.04.310 and 82.16.060.
[16] RCW 82.16.050(2).
[17] RCW 82.16.050(9).

power business. An entity that is not a light and power business is subject to the B&O tax statutes which contain no such deductions.

Neither the PUT nor the B&O tax statutes allow a deduction for the sale of electricity by a light and power business to a non-light and power business for resale within Washington, regardless of whether that resale will be back to a light and power business or to an end-user.[18] These types of sales, which only began to be made in Washington in mid- to late- 1997, were not contemplated at the time the PUT statutes were written.

This imposition of tax under current law on sales by a light and power business to a non-light and power business was unanticipated by many in the electricity industry. One stakeholder reacted by pointing out that this "literal" interpretation of the law "frustrates the original intent of the code—which was to exclude sales for resale." Another acknowledged that while the Department of Revenue is not free to implement what they consider to be the "intent" of the PUT deductions our interpretation "will significantly reduce the power marketing activity in the state." Another stakeholder asked the Department to remove this section from the report and to conduct a separate process on this issue in order to quantify the magnitude of impact this might have on the industry.

The study team feels the information in this section is sufficiently relevant to the legislative imperative to conduct a study and report on the current taxation of the electricity industry.

[18] The Department understands that some believe there is a generalized "wholesale" deduction against the PUT for any sale for resale. One possible reason for this belief may be that it was recognized by the court in *PUD No. 2 of Grant County v. State*, 82 Wn.2d 232 (1973). The court in this case characterized the PUT as a non-pyramiding tax. However, the transactions at issue before the court were between light and power businesses subject to PUT. The resale deduction codified in RCW 82.16.050(2) is expressly limited to sales to persons in the same public service business, for resale in this state. Accordingly, the court's general observation in Grant County, while correct as to the transactions at issue, was not made in respect to the transactions where the buyer was not a light and power business. That issue was not before the court.

CHAPTER 3
CURRENT TAXATION OF THE ELECTRICITY INDUSTRY

3.1 Overview of Chapter

This chapter analyzes the major taxes currently paid by electricity industry taxpayers. In the pages following, each major tax is briefly described. The description includes the following:

- The incidence of tax; that is, the activity triggering the tax.
- Tax rate.
- Measure of tax or tax base. This section will include exemptions and deductions affecting the measure of tax and credits that reduce the tax.
- Collection of tax.
- Allocation of tax revenues collected.

The description of each tax will also include total revenues collected. Additionally, if appropriate, each tax will be analyzed under the following three categories.

Function. Function refers to those three categories into which the electricity business is generally divided: transmission, distribution, and generation. *Transmission* refers to the high voltage system that delivers power from the source of generation to the distribution system. In Washington, approximately 80 percent of the transmission is federally owned. *Distribution* refers to the system of wires that takes electricity from the transmission system and delivers it to the consumer's meter. Distribution is primarily owned by the vertically integrated utility. *Generation* refers to the production of the electricity. Approximately half of Washington's electricity is federally generated.[19] The remaining amount may come from any of the following three sources: electricity generated in Washington by a vertically integrated utility, electricity generated in Washington by an independent power producer, or electricity imported from an out-of-state supplier.

Washington's light and power businesses sell electricity as a bundled product. That is, the stated price to the customer for electricity does not reflect separate charges for generation, transmission, and distribution. Therefore, revenues received cannot be specifically allocated to the functions. However, the 2831 study shows *costs* allocated between these three functions. Where appropriate, tax revenues are allocated to the functions pursuant to the cost percentages from the 2831 study. While there is no direct relationship between costs, pricing, and tax revenues, the allocation by function based on the cost percentages is made for purpose of analyzing tax revenues from a different perspective.

Customer Class. When possible, the tax revenues will be allocated to customer classes. The customer classes are residential, commercial, and large industrial. These classes are those used in federal energy statistics. To these three classes we added the class of direct service industry (DSI) when applicable. There are approximately ten DSIs in Washington. DSIs are those large businesses located in Washington that mostly produce aluminum and who receive power directly from BPA or purchase power on the wholesale market. In 1997, they consumed an estimated

[19] 6560 study. P. 1-19.

15,506 megawatts of electricity which is equal to 17 percent of the electricity consumed in Washington.[20]

Entity. Entity refers to the categories into which businesses playing a part in the electricity industry may be classified. This report shows tax revenues paid by each entity.

As used in this report, entity includes light and power businesses categorized by their authorizing statutes. Approximately seventy-eight light and power businesses pay the public utility tax. For analysis purposes the seventy-eight are grouped into the following entities.[21]

Cities and Towns. Chapter 35.92 RCW allows cities and towns to operate light and power businesses.

Investor-Owned Utilities. The electricity industry refers to privately-owned for profit corporations that are light and power businesses as investor-owned utilities (IOUs). The UTC regulates most investor-owned utilities.

Mutuals and Cooperatives. Mutuals and cooperatives are non-profit corporations organized under chapters 23.86 and 24.06 RCW respectively. They provide electricity predominantly in rural areas or areas that were at one time rural.

Port Districts. Port Districts perform a variety of public benefit services consistent with their authorizing statutes found in Title 53 RCW. In some cases, those services include acting as a light and power business within its geographic area.

Public Utility Districts. Similar to port, water, and irrigation districts, public utility districts are governed by statute, Title 54 RCW. The public benefit services provided by public utility districts include providing electricity.

Energy Northwest/Washington Public Power Supply System. Washington Public Power Supply System (WPPSS) was the name of the operating agency organized under chapter 43.51 RCW and which owns and operates Packwood Lake Hydroelectric Project and Nuclear Plant #2. WPPSS recently changed its name to Energy Northwest. Energy Northwest is comprised of a group of public utility districts. For purposes of this report, tax revenues reported by Energy Northwest are included in the public utility district data.

Water and Irrigation Districts. Water and irrigation districts, authorized by Titles 57 and 87 RCW respectively, provide public benefit services in their geographic areas. Some of these districts provide electricity as well as water and sewer services.

In addition to the seventy-eight taxpayers who pay the PUT, there are two other entities that meet the definition of a light and power business but do not have a PUT liability. These entities are:

[20] The 15,506 MWh is estimated by adding to the MWh sold by BPA to the DSIs (12,405) an additional 20% based on information that BPA provides 80 percent of the power consumed by the DSIs.
[21] See Appendix A for a listing of the light and power businesses.

Independent Power Producers. Independent power producers (IPP) are entities that own electricity generation facilities and produce electricity for sale in the open market. IPPs are also known as non-utility generators. They do not own distribution lines and do not generally have retail customers. They are not regulated by the WUTC but do have some reporting responsibility to the Federal Energy Regulatory Commission. They do not pay the PUT because the law allows an exemption for sales of electricity made by one light and power business to another light and power business. If the IPP exports the electricity out of state, regardless to whom it is sold, the PUT does not apply because statute provides a deduction for out-of-state sales.

In 1998 the four IPPs located in Washington produced a combined 5,126,485 MWh of electricity. The four IPPs are Encogen Northwest, L.P., March Point Cogeneration Company, Sumas Cogeneration Company, L.P., and Tenaska, Inc.

Federal Entity. The Bonneville Power Administration (BPA) meets the definition of a light and power business in this state. However, BPA is authorized under federal law. It is federally owned and is not subject to state taxation nor can the obligation to collect taxes, such as a sales tax, be imposed on the BPA. BPA owns 80 percent of the transmission lines in Washington and provides approximately half of the power consumed in this state.

In addition to light and power businesses, marketers and brokers play a role in the electricity industry. Brokers receive a commission for putting together willing buyers and sellers. The Department is unaware of any persons doing business in Washington as electricity brokers.

Marketers. Marketers are persons who buy and sell electricity futures contracts and/or buy electricity to sell later for delivery. Marketers do not meet the definition of a light and power business and therefore are subject to the B&O tax rather than the public utility tax.

3.2 State Public Utility Tax (PUT)

The PUT is imposed upon a light and power business.[22]

Any type of business may meet the definition of a light and power business (see footnote 6) regardless of its principal business activity. This is true even if the taxpayer is primarily engaged in another business or sells only a relatively small amount of electricity to a single buyer. It is not relevant whether it is subject to state regulatory authority or makes sales to the public at large.

Incidence of tax

The PUT is triggered by the earning of gross receipts by a light and power business from the generation, sale, or distribution of electricity and from wheeling electricity for another, and including operations incidental thereto.[23]

Tax Rate

[22] Chapter 82.16 RCW.

[23] This paragraph on the incidence of tax is not intended to be a precise legal statement of the imposition of the PUT. For legal thoroughness please refer to RCW 82.16.010(5)(10), and (11), and 82.16.020.

The tax rate is 3.873 percent.

Measure of tax

Gross receipts reduced by exemptions and deductions. Once the tax liability is determined it may be reduced by credits.
Exemptions allowed against gross receipts:

Federal Electricity Sales. Sales made by a federal entity, such as the BPA, are not subject to state tax. Washington purchasers of BPA electricity may be light and power businesses that will resell the electricity or they may be end-use consumers. In the event power purchased from BPA is resold in Washington to an end-use consumer by the light and power business, PUT will apply to the gross revenues from the consumer. Table 3.2.1 shows BPA sales, firm and non-firm, to Washington.

Table 3.2.1

BPA Sales in Washington

	1998	1997	1996
DSIs	$271,973,314	$211,015,006	$299,413,413
Co-ops	65,869,943	67,289,833	90,742,926
Federal Agencies	17,527,446	18,805,196	23,197,998
Cities and Towns	88,028,847	93,829,546	121,037,009
Other Industries	17,167,889	16,766,978	18,678,896
Private Customers	134,243,270	151,638,514	101,210,316
PUDs	288,684,651	300,170,686	395,807,362
TOTAL	**$883,495,360**	**$859,515,759**	**$1,050,087,920**

Source: Bonneville Power Administration

Deductions allowed from gross receipts:

Wholesale sales by light and power businesses to other light and power businesses. A deduction is allowed for amounts derived from the sale of electricity from one light and power business to another for resale within Washington State.[24]

The deduction is not available for wholesale sales by a light and power business to other types of businesses such as marketers or brokers.

Table 3.2.2 shows the estimated amounts of sales for resale in Washington made by Washington light and power business. These are base amounts reported to the US Department of Energy, Energy Information Administration, the Department of Revenue, and to other industry sources.

[24] RCW 82.16.050(2).

Table 3.2.2

Year	Electricity Sales For Resale in Washington
1997	$3,116,673,000
1996	$1,906,041,000
1995	$1,450,480,000

Exported Power. A deduction is provided for the production, sale, or transfer of electricity sold for resale or consumption outside this state.[25]

The effect of this deduction is to remove from the PUT all retail and wholesale sales of electricity to out-of-state customers whether those sales are to consumers, utilities, marketers, or brokers.

With available data, it is not possible to accurately measure the amount of electricity being exported from the state.

Low density electric power. A deduction is allowed for light and power businesses whose customers are geographically dispersed.[26]

Twenty-one light and power businesses used this deduction in 1998 for a total reduction in PUT revenues of approximately $1 million.

Cogeneration, Renewables, and Energy Conservation. A public utility tax deduction is allowed for costs of producing energy through cogeneration facilities; renewable energy resources such as solar energy, wind, hydroelectric, wood, and agricultural products; and for amounts expended to improve energy efficiency.[27] This deduction applies only to new facilities or measures to improve energy use on which construction or installation began after June 12, 1980, and before January 1, 1990.

Twelve light and power businesses used the deduction in 1998 for a total reduction in PUT revenues of $446,000.

Credits allowed against PUT:

Pollution Control Credit. A credit is allowed for up to 50 percent of the installation costs of required pollution control facilities, taken at no more than 2 percent per year. [28]

During 1998, approximately $1.3 million in pollution control credits were taken by seven light and power businesses. This amount has remained relatively constant over the past five years.

[25] RCW 82.16.050(9).
[26] RCW 82.16.053.
[27] RCW 82.16.055.
[28] RCW 82.16.045, Chapter 82.34 RCW.

Electric utility rural economic development. As part of the effort to stimulate economic activity in rural areas of the state, the Legislature passed Engrossed Substitute House Bill (ESHB) 2260, Chapter 311, Laws of 1999. This legislation allows a light and power business to claim a credit up to $25,000 per calendar year against the public utility tax for amounts contributed to an electric utility rural economic development revolving fund. The credit has a statewide cap per fiscal year of $350,000.

No data is available yet for this credit.

Collection of Tax

Utility businesses report to the Department of Revenue either monthly, quarterly, or annually by filing the combined excise tax return.

Allocation of Tax Revenues

All of the public utility tax revenues are deposited to the state General Fund.

Entities Subject To Public Utility Tax

Table 3.2.3 shows PUT taxable gross receipts (gross revenues reduced by exemptions and deductions) and tax revenues for all payers over the last six fiscal years.

Table 3.2.3

Taxation of Electricity Providers

Fiscal Year	Taxable Gross Receipts	PUT Revenues
1998	$3,362,372,911	$130,224,376
1997	3,249,289,228	123,673,016
1996	3,182,375,923	123,246,987
1995	3,093,267,900	119,795,805
1994	2,935,825,298	113,704,470
1993	2,654,769,474	102,819,229

Table 3.2.4 shows 1997 public utility taxes paid by light and power businesses categorized into entity type. The average tax revenue per kilowatt-hour is based on data reported by the light and power businesses to the US Department of Energy, Energy Information Administration.

Table 3.2.4

Public Utility Tax Revenues By Entity		
Organization Type	**Public Utility Tax Calendar 1997**	**Public Utility Tax Avg. Amount per kWh**
Cities And Towns	$24,367,655	$0.00145
Independent Power Producers	0	0.00000
Investor-owned Utilities	60,037,457	0.00207
Mutuals and Coops	5,487,613	0.00171
Port Districts	118,247	0.00058
PUDs	33,357,484	0.00125
Water and Irrigation Districts	304,560	0.00161

Revenues Allocated to Function

Table 3.2.5 shows PUT revenues allocated to the function of generation, transmission, and distribution. The allocation is based upon the cost percentages for those three functions as reported by the light and power businesses in the 2831 study. The authors of the 2831 study offer their advice regarding the difficulty in analyzing data by function in a bundled environment:

> "The cost data included in these reports reflect all scale and scope economies that may be captured within a bundled service. They do not provide any direct measurement of the size of those economies, or whether they would be lost or enhanced if services were provided on a fully separate basis. Consequently, the cost data included in the utility reports and summarized in this report cannot be extrapolated or interpreted to accurately represent costs that might be experienced under retail utility service structures that differ from bundled service."[29]

The authors of the 2831 study made clear that the costs reported in the study do not reflect what costs would necessarily be if generation, transmission, and distribution were provided as separate services, nor do the reported costs reflect how the separate functions would be priced. Therefore, table 3.2.5 should not be interpreted to show the amount of potential PUT revenues if light and power businesses were to separate their functional areas. The table is offered as a potentially useful tool for analyzing the PUT revenues from a different perspective.

[29] P. 24, The 2831 study.

Table 3.2.5

PUT Tax Due Divided By Functional Cost			
	(Cents/kWh)	**Percent**	**PUT**
Generation	2.498	57.5	72,440,183
Distribution	1.090	25.1	$31,609,207
Transmission	0.357	8.2	10,352,740
Other	0.397	9.1	11,512,711
TOTAL COST	**4.342**	**100.0**	**$123,673,016**

Data Source: Cost information is from Table 4.2, page 30 of the 2831 study.

Revenues Allocated to Customer Class

Table 3.2.6 shows PUT revenues allocated to customer class. Customer Class represents all customer types for entities reporting to the Energy Information Administration and reporting public utility tax to the Department of Revenue. The percentage shown indicates the proportionate share of total customers represented by that class.

Table 3.2.6

PUT Allocated To Customer Class For Calendar 1997			
Customer Class	**Number of Customers**	**Thousand kWh**	**Allocated PUT Revenues**
Residential 88.9%	2,319,972	31,749,220	$60,226,220
Commercial 10.6%	277,641	21,709,039	39,630,306
Industrial .5%	13,409	22,482,012	23,816,490
TOTAL	**2,611,022**	**75,940,271**	**$123,673,016**

Note: PUT has been allocated based on sales revenue by customer class.

3.3 State Business and Occupation Tax (B&O)

The business and occupation tax is levied upon the privilege of engaging in business in Washington.[30] Businesses are taxable according to the activities in which they engage and may be subject to more than one B&O tax rate. While a light and power business pays PUT for gross revenues from providing electricity service, it pays B&O tax on gross revenues from certain other business activities. For example, a light and power business selling appliances is subject to the B&O retailing tax on the sale.

Incidence of Tax

B&O tax is due on the receipt of gross revenues from the applicable business activity.

[30] Chapter 82.04 RCW

- For light and power businesses, the B&O tax is triggered by earning gross revenues from activities other than the generation, sale, or distribution of electricity.[31]
- For marketers, the tax is triggered by earning revenues from trading of futures contracts or from sales of electricity.[32]
- For brokers, in the event they conduct business in Washington, the incidence of tax is the earning of a commission.[33]

Tax Rate

Various tax rates apply depending on the business activity to be taxed. The service rate of 1.5 percent is applicable to sales of futures contracts, sales of electricity by a marketer, and services performed by a light and power business for non-customers. The retailing rate of .471 percent is applicable to retail sales made to consumers such as the sale of appliances.

Measure of Tax

B&O tax is based on gross receipts (gross income, gross sales or value of product) as a measure of the privilege of engaging in business. Various exemptions, deductions, and credits are available but none are specific to the activities engaged in by light and power businesses or marketers. However, the exemptions, deductions, and credits may be available to individual electricity-related taxpayers based upon their particular tax situation.

Collection of Tax

The B&O tax is reported and remitted monthly, quarterly, or annually to the Department of Revenue on the combined excise tax return.

Allocation of Tax Revenues

All B&O tax receipts are deposited into the state General Fund.

Table 3.3.1 shows B&O taxes paid by each entity category of light and power businesses. The B&O taxes represent the total B&O tax liability of the business and not necessarily those related only to transactions involving electricity.

[31] RCW 82.16.060 and WAC 458-20-179(4).
[32] RCW 82.04.080 and WAC 458-20-162; RCW 82.04.290. This report does not reflect any B&O tax paid by marketers.
[33] RCW 82.04.290

Table 3.3.1

B&O Tax Paid By Entity Type		
Entity Type	**Fiscal Year 98**	**Fiscal Year 97**
Cities and Towns	$630,062	$575,993
Independent Power Producers	229,718	235,689
Investor-owned Utilities	1,276,354	1,344,970
Mutuals and Co-ops	110,396	96,361
Port Districts	1,704,946	1,634,076
PUDs	569,491	529,753
Water and Irrigation Districts	139,758	102,301
TOTAL	**$5,183,665**	**$4,519,143**

3.4 Public Utility District (PUD) Privilege Tax

The PUD privilege tax applies to electric power generated and sold by public utility districts.[34] Although not stated in the statute, the tax is intended to be in lieu of property tax to allow schools and other taxing districts to receive revenues from the investment in PUD distribution, transmission, and generation facilities.

Incidence of tax

The PUD privilege tax is triggered by earning gross revenues from sales of electricity to customers who are served by the distribution system owned by the PUD and from the calculated value of self-generated power.

Tax Rate

HYDROELECTRIC DAMS AND OTHER FACILITIES

Distribution (tax base is retail sales):

- 2.14 percent of gross revenue from the sale of power to consumers that is distributed through the districts' distribution system; plus

Generation (tax base is wholesale value):

- 5.35 percent of the first four mills (i.e., .004 x .0535 = .000214) per kilowatt-hour of the wholesale value of self-generated energy regardless of whether produced for resale or sold to end-use consumer.

THERMAL GENERATING FACILITIES

[34] Chapter 54.28 RCW.

Thermal generating facilities are defined as plants with a design capacity of 250,000 kilowatts or more located on a federal reservation, which utilize steam derived from fossil or nuclear fuels, and which became operational after September 21, 1977. This rate applies only to WNP #2 operated on the Hanford reservation by the Energy Northwest.

- 1.605 percent of wholesale value of energy produced for sale or use.

Measure of tax

The tax is measured by gross income derived from the sale of electric energy distributed to customers, the imputed wholesale value of the number of kilowatt-hours of self-generated energy which is either distributed to consumers or resold to other utilities, and the wholesale value of energy produced in thermal plants.

Collection of Tax

The Department of Revenue administers the PUD privilege tax. Public utility districts file an annual return containing the necessary information pertaining to their income and production data on power generated or sold by the district during the previous calendar year. The Department calculates the amount of tax due and notifies the district of its liability.

Allocation of Tax Revenues

HYDROELECTRIC FACILITIES:

(1) Basic tax rate (i.e., 2 percent of gross revenue and 5 percent of first 4 mills) goes to:

- 4% state general fund; and
- 96% to be further distributed as follows:
  - 37.6% to the state general fund for public schools; and
  - 62.4% to counties to be further allocated as follows:
    - receipts from the 2 percent tax on gross revenue go to those counties from which the sales to customers were made in the same proportion. The county treasurer distributes amounts received under this distribution to all local taxing districts, except schools, in the most equitable manner (in most instances to approximate the distribution of property tax levies). The county treasurer also distributes to cities a minimum amount equal to 0.75 percent of the gross revenue derived by the PUD from the sale of energy within the city; and
    - receipts from the 5 percent tax on the first 4 mills for both self-generated power and sales for resale are distributed based on the location of the dams and the reservoirs they create. In instances where the dams and reservoirs are located in more than one county, statute provides a complex distribution mechanism based on the total cost of the facilities to allocate the receipts among these counties.

(2) Surtax (7.0 percent surtax which increases the basic rates to 2.14% and 5.35%) is deposited entirely to the state General Fund.

THERMAL GENERATING FACILITIES:

(1) Basic rate (1.5 percent of wholesale value) goes to:

- 4.0% state general fund; and
- 96.0% distributed as follows:
  - 50% state general fund for public schools; and
  - 50% local taxing districts within Washington State based on their population relative to the total population within the "impacted area" which is defined in RCW 54.28.010(7) to mean the area within 35 miles of the southern entrance to the Hanford reservation. The 50 percent share for local taxing districts within the impact area is divided among the following districts:

    22% counties;
    23% cities;
    3% fire districts; and
    2% certain library districts.

(2) Surtax rate (7 percent surtax which raises the rate to 1.605 percent) is deposited entirely to the state general fund.

Table 3.4.1 shows the allocation of PUD privilege tax revenues to state and local funds.

Table 3.4.1

PUD Privilege Tax Distributions ($000)

Fiscal Year	State	Local	TOTAL
1998	$12,415	$15,099	**$27,514**
1997	12,540	15,254	**27,794**
1996	12,161	14,686	**26,847**
1995	11,815	14,303	**26,118**
1994	10,862	13,107	**23,969**
1993	10,041	12,240	**22,281**
1992	10,231	12,622	**22,853**
1991	9,985	11,756	**21,751**
1990	9,490	11,493	**20,983**
1989	9,073	10,966	**20,039**

Entities Subject to the PUD Privilege Tax

Public Utility Districts, including Energy Northwest, are the only light and power businesses that pay this tax.

Table 3.4.2

PUD Privilege Tax Paid			
Calendar Year	**Generation**	**Distribution**	**TOTAL**
1998	$8,641,653	$18,872,821	**$27,514,474**
1997	8,577,666	19,216,260	**27,793,927**
1996	8,140,360	18,707,008	**26,847,368**
1995	7,394,851	18,722,471	**26,117,322**

3.5 Voluntary and Directed Compensatory Payments

When a city owns, constructs, or operates an electricity generation facility located in a county other than the county in which the city is located, the city may make payments to that county.[35] The purpose of the payments are to compensate the county or taxing districts for the financial burden of providing services to the facility and to the employees working there and to their families. The amount of payment is not set by statute but is negotiated between the city and the taxing district. The payments are voluntarily made for facilities constructed prior to March 17, 1955 and are directed for facilities constructed thereafter.

These voluntary and directed payments are not taxes. Nevertheless, they have been included in this report because the payments serve a purpose similar to the PUD privilege tax. Further, the payments in this study represent a tax-type obligation imposed upon the city-owned light and power businesses. Including the voluntary and directed payments in this study provides a complete picture of the obligations on all light and power businesses.

Seattle and Tacoma are the only two city-owned light and power businesses that make the statutorily imposed compensatory payments. Seattle City Light makes payments to Lewis, Pend Oreille, and Whatcom counties, the Pend Oreille Fire District #2, and to the Concrete School District in Skagit County. Tacoma Public Utilities makes payments to both Lewis and Mason counties and to the schools in Eatonville, Mossyrock, and Morton. Additionally, Tacoma makes payments for fire protection in Pierce, Mason, and Lewis counties and to the drainage district in Pierce County.

Table 3.5.1

Voluntary and Directed Compensatory Payments		
Payer	**Year**	**Payment**
Seattle City Light	1998	$1,480,481
Tacoma Public Utilities	1998	1,013,942
TOTAL		**$2,494,423**

[35] RCW 35.21.420, 35.21.422, 35.21.425.

3.6 Property Taxes

Property taxes apply to the assessed value of all taxable property, which includes all real and personal property located in the state, unless specifically exempted by statute.[36] This includes all of the operating property (those assets related to generation, transmission, and distribution of electricity) of electric light and power companies.

The term "Electric Light and Power Company" is defined differently in the property tax statutes than is "light and power business" in the excise tax statutes. There is no material difference between the two definitions and both encompass the same businesses. For property tax purposes, the definition is as follows:

> "'Electric light and power company' means and includes any person owning, controlling, operating or managing real or personal property, used or to be used for or in connection with or to facilitate the generation, transmission or distribution of electricity in this state, and engaged in the business of furnishing, transmitting, distributing or generating electrical energy for light, heat or power for compensation as owner, lessee or otherwise."RCW 84.12.200.

Incidence of tax

The tax is triggered by owning property subject to tax.

Tax Rate

The Washington State Constitution requires that all property be uniformly taxed. Therefore, the same tax rates are applied to electric light and power companies as are applied to all other property in Washington. [37]

Property tax rates consist of the annual levy rates applied to the assessed value of taxable property of the various taxing districts, including the state and 27 types of local jurisdictions which have levy authority under state law. In 1997 there were some 1,747 taxing districts throughout the state. Property tax levy rates are expressed in terms of dollars per $1,000 of assessed value. A taxing district's rate must apply uniformly throughout the district boundaries. However, because of the many overlapping jurisdictions, there are 3,210 tax code areas in which a particular combination of levy rates may apply.

Measure of Tax

Property taxes apply to the assessed value of all taxable property, which includes all real and personal property located within the state, unless specifically exempted. Real property includes land, structures and certain equipment that is affixed to structures. Personal property includes

[36] Title 84 RCW.

[37] Because of our uniformity clause, Washington will not experience significant property tax revenue loss such as occurred in other states when the vertically-integrated utilities divested themselves of generation or transmission assets. In those states, utility property was "classed" differently and subject to higher property tax rates.

items that are generally movable, machinery, supplies, and certain utility property such as poles and wires.[38]

Real Property. The goal of the appraisal/valuation process is to determine the fair market value of the property, according to its highest and best use.

If the property is located in a single county it is locally assessed by the county assessor who determines the value. Typically, the assessor revalues real property by conducting a physical inspection once every four years.

If the electric light and power company property is located in more than one county, the assessed value is determined by the Department of Revenue using a combination of three valuation methods: cost approach, income approach, and market (stock and debt) approach. The Department values inter-county electric light and power companies annually.

Personal Property. Major types of personal property that are taxable consist of machinery and equipment and most of the operating property of electric light and power companies.

If the property is locally assessed owners of personal property list the items, their acquisition cost, and the year acquired with the county assessor each year. The assessor then determines the current assessed value.

For inter-county electric light and power companies, personal property is not valued separately but is a component of the entire operating unit under valuation.

Exemptions.

Exemptions that may be applicable to electric light and power companies include certain intangibles and new investment in air pollution control equipment.

Collection of Tax

Local Assessment. The property tax is levied and collected at the county level. Property tax bills are prepared by the county assessor and submitted once a year to the property owner. Payment is due from the taxpayer in April and October.

Inter-county Assessment. The Department of Revenue establishes the value of the property and certifies the value to the county assessor who in turn levies and collects the property tax at the county level.

Allocation of Tax Revenues

Collected property taxes, both centrally and locally assessed, are distributed between the state and local taxing jurisdictions. The approximate allocation is 25.8% to the state and 74.2% to the local taxing jurisdictions. The state levy amount is deposited in the state General Fund for support of basic education. The local levies are deposited to the account of the taxing district to be used for purposes specified by the taxing district.

[38] RCW 84.12.280.

Entities Subject to Property Tax

Publicly owned property is not subject to property tax. Table 3.6.1 shows property taxes, both real and personal, paid by privately owned electric light and power companies for 1997.

Table 3.6.1

Property Taxes Paid by Entity

Entity	Assessed Value	Property Taxes Calendar 1997
Independent Power Producers	$432,358,315	$5,642,904
Investor-Owned Utilities	2,789,626,159	38,859,492
Mutuals and Co-ops	159,222,689	2,217,972
TOTAL	**$3,381,207,163**	**$46,720,368**

3.7 Other Generally Applicable Taxes

Light and power businesses and marketers are subject to various generally applicable excise taxes and payroll taxes. Payroll tax liabilities are not within the scope of this study. Regarding the generally applicable excise taxes, amounts paid by persons in the electricity industry are not readily available. Nevertheless, the taxes are discussed below to help give a complete picture of the taxes imposed on the industry.

3.7(A) Sales and Use Tax

A sales tax is due on retail sales of tangible personal property not specifically exempted from sales tax and on the provision of certain services. The use tax is due from the consumer on purchases when the tax was not collected by the retailer.[39]

Incidence of Tax

A purchase made by a light and power business of tangible personal property or a service that is not purchased for resale and that will be consumed or used by the business triggers the sales tax. For example when a light and power business purchases a computer, phone service, or office supplies the sales tax is due.

Additionally, new construction of generation and distribution facilities is subject to sales or use tax on the cost of the project unless specifically exempted. Similarly, costs to repair and maintain existing plant and facilities are subject to sales tax.

Tax Rate

The state portion of the sales tax is 6.5 percent. In addition to the state sales tax, cities and counties have the authority to impose a local sales tax. The combined state and local sales tax rate now ranges from 7.0 to 8.6 percent depending upon the jurisdiction. The use tax is at the same rate as the combined sales tax rate.

[39] Chapters 82.08 and 83.12 RCW.

Measure of Tax

The measure of the sales tax is the selling price of tangible personal property and certain services purchased at retail. The measure of the use tax is the value of the taxable item or service. Certain retail sales or purchases are exempt from sales tax.

Exemptions:

Air pollution control facilities at a thermal electric generation facility. Construction of air pollution control facilities at a thermal electric generating facility which was placed in operation after December 31, 1969 and before July 1, 1997 is exempt from sales and use tax. The exemption is contingent upon compliance with certain provisions. Only one taxpayer is known to qualify for this exemption.[40]

Use of machinery and equipment used in generating electricity using wind, sun, or landfill gas. Machinery and equipment used directly in generating electricity by the use of wind, sun or landfill gas, as well as the labor and services necessary to install such equipment is exempt from sales tax. Availability of the exemption is limited to a facility generating 200 or more kilowatts. This exemption expires on June 30, 2005.[41] Only a small number of power producers benefit from this exemption.

Collection of Tax

The sales tax is collected by the person making the sale. If the sales tax is not collected by the retailer, the use tax must be paid by the light and power business.

Allocation of Tax Revenues

The state portion of the sales and use tax is deposited into the state General Fund. The local portion is distributed by the Department to the city and/or county in accordance with the local jurisdiction tax code supplied to the retailer.

Entity

All light and power businesses without distinction between public and private must pay the sales and use tax when applicable.

3.7(B) Real Estate Excise Tax

Incidence of Tax

The tax is triggered by the sale or transfer of property subject to REET. The seller is generally liable for the tax, although the buyer is liable if the tax is not paid by the seller.

[40] RCW 82.08.810.
[41] RCW 82.08.02567.

Tax Rate

The state portion of the REET is 1.28 percent. Local options may add another 2 percent; however, no local taxing jurisdiction has authorized the full compliment of options. The combined REET rate ranges from 1.53 percent to 1.78 percent.

Measure of Tax

The tax is measured on the full selling price or transfer value of the property.

Collection of Tax

For sales of property, REET is collected by the county treasurer. For a transfer of property, REET is paid directly to the Department of Revenue.

Allocation of Tax Revenues

The state portion of the REET is deposited in the state General Fund for the exclusive use in funding education and public works assistance. The city and county portions of REET are allocated pursuant to the authorization for imposing the tax. Most cities and counties have authorized 0.25 percent which is earmarked for capital improvements only.

Entities Subject to the Real Estate Excise Tax

Political subdivisions of the state such as water and irrigation districts, public utility districts, port districts, and light and power businesses owned by cities are exempt from the REET. On the other hand, mutuals and cooperatives, investor-owned utilities, and independent power producers are liable for REET upon the sale or transfer of facilities.

3.8 Local Taxes

Cities and towns are authorized by statute to impose certain fees and taxes. Light and power businesses located or serving customers within a city's limits are subject to taxation by that city if the applicable taxes have been enacted and approved by the local government.

3.8(A) Local Public Utility Tax

The local public utility tax is a privilege tax imposed on light and power businesses located or serving customers within the city.[42] If the tax is imposed on a public utility district selling electricity within the city, the PUD can add the amount of any such tax to the rate it charges for electricity sold within the city or town.[43]

The local public utility tax is generally based on gross receipts and is limited to 6.0 percent unless the voters approve a higher rate. The average tax rate for the city PUT on electricity was 5.38 percent in 1996 according to a survey published by the Association of Washington Cities.

[42] RCW 35.21.870.
[43] RCW 54.28.070.

Table 3.8.1

1997 Local Utility Tax Revenue Collected by Cities	
From PUDs	$19,846,225
From City Light and Power Businesses	40,733,504
From IOUs and Mutuals/Cooperatives	43,664,440
TOTAL	**$104,244,169**

Source: State Auditors Office and Association of Washington Cities.

3.8(B) Local Sales and Use Taxes

Sales and use taxes paid by light and power businesses include the applicable local rates and are distributed to cities and counties.

Authorized local sales and use tax rates range from 0.5 percent to a maximum of 2.8 percent. However, the highest rate imposed by any jurisdiction is 2.1 percent which rate includes the 0.4 percent regional transit authority tax. Very few jurisdictions (the unincorporated areas of Asotin, Klickitat, and Skamania counties) do not collect the 0.5 percent; most impose at least 1 percent.

CHAPTER 4
TRENDS IN THE ELECTRICITY INDUSTRY

4.1 Introduction

Changes in the electricity industry may result in changes in revenues to the state. To determine whether the state might gain or lose revenues, the study team identified trends in the electricity market and then analyzed the tax consequences of those trends.

A wide range of sources, including industry representatives, consultants, study participants, and other interested persons provided information about trends occurring in the electricity industry. Those trends are described below.

4.2 Baseline Revenue Forecast

One trend is that the electricity industry in Washington may not undergo significant changes. Table 4.2.1 is a revenue forecast showing what state and local taxes would be paid by light and power businesses if the electricity market follows historic patterns. That is, Washington light and power businesses continue to provide bundled service to their customers and no new services are made available. This forecast is based on the Northwest Power Planning Council's (NPPC)[44] medium forecasts for electricity prices and demand growth. All trends discussed below can be related to this baseline to give the reader a picture of possible revenue gains or losses.

The NPPC forecast was used to provide an objective analysis of potential changes in electricity demand and price. This forecast is much more comprehensive than what could have been produced by the study team within the time frame given for completing this study.

The time frame used in the baseline forecast was also used for analysis of the trends discussed in this section of the report. Potential tax revenue impacts are projected to take place within a six-year time frame. This is not to say that further revenue impact would not take place beyond the six years, only that this analysis did not consider potential trends more than six years into the future.

[44] Through the Northwest Power Act of 1980 (Public Law 96-501), the western states of Idaho, Montana, Oregon, and Washington formed a compact and established the Northwest Power Planning Council (NPPC). http://www.nwppc.org/

Table 4.2.1

Forecasted Revenue For Various Tax Types

Fiscal Years	Public Utility State	Public Utility City	Change	PUD Privilege	Change	Property	Change
Base 1998	$130,224,376	$107,871,866		$27,793,927		$44,869,045	
Forecasted							
1999	136,735,595	113,265,459	4.8%	27,657,582	-0.5%	46,439,461	3.4%
2000	140,564,191	116,436,892	2.7%	27,725,754	0.2%	48,064,842	3.4%
2001	145,062,246	120,162,873	3.1%	28,335,721	2.2%	49,747,112	3.4%
2002	149,123,988	123,527,433	2.7%	29,129,121	2.7%	51,488,261	3.4%
2003	153,299,460	126,986,201	2.7%	30,061,253	3.1%	53,290,350	3.4%
2004	157,591,845	130,541,815	2.7%	30,902,968	2.7%	55,155,512	3.4%
2005	162,004,417	134,196,986	2.7%	31,768,251	2.7%	57,085,955	3.4%

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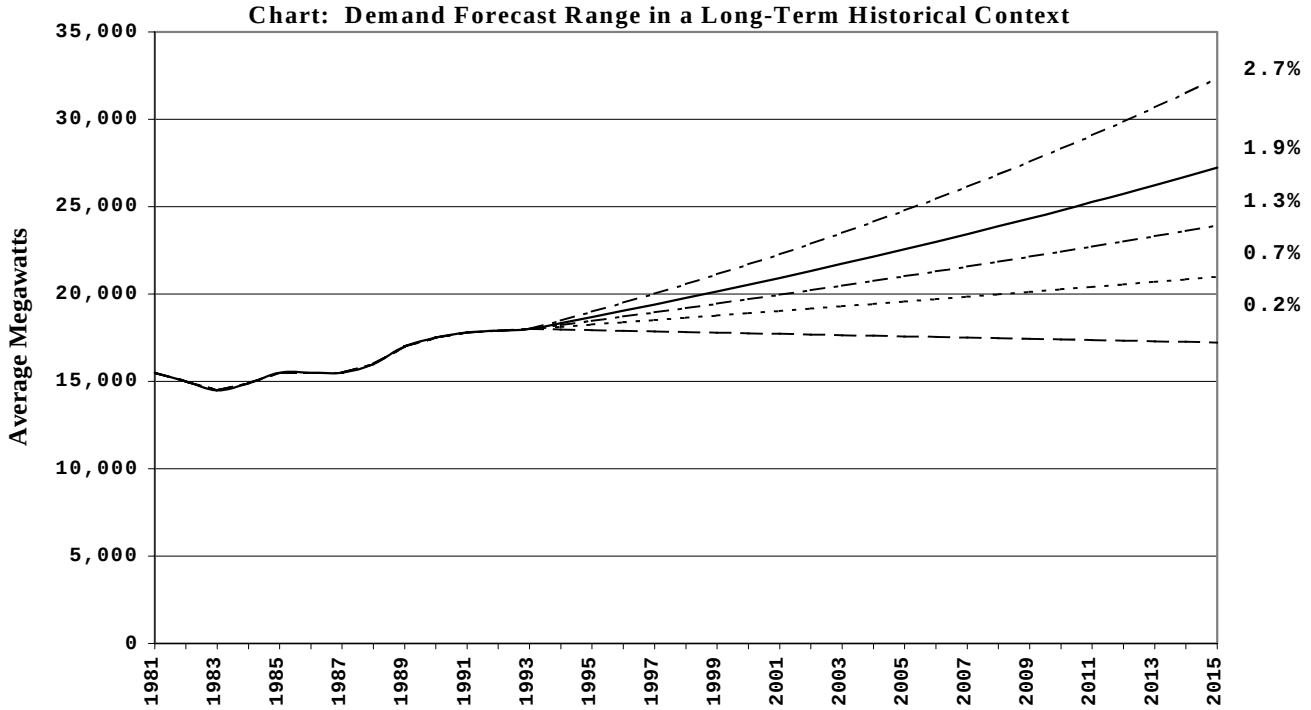
Assumptions and Data Sources for Baseline Revenue Forecast

The chart below and table 4.2.2 were used to produce the baseline revenue forecast (table 4.2.1). The chart and table 4.2.2 show a forecast for electricity demand and price in the Northwest. Both give an indication of the possible range in electricity demand and price. In general, the chart and table show that electricity prices are expected to be stable and that moderate growth in electricity demand is expected. An assumed growth rate in demand of 1.3 percent and no change in electricity prices were used to produce the baseline revenue forecast (table 4.2.1).

The chart projects growth rates in electricity demand to be between 0.7 percent and 1.9 percent per year, with equal



and relatively high probability. This equates to a difference of approximately 1,500 average megawatts in 2005. The high and low forecasts of a negative 0.2 percent and 2.7 percent are possible but much less likely. The difference between the high and low forecasts equates to 3,500 average megawatts in 2005.

Table 4.2.2

Average Regional Real Retail Electricity Price Forecasts (1995 cents Per Kilowatt -hour).				
Forecast Case	**1994**	**2005**	**2015**	**Growth Rate 1994-2015**
Low	4.2	3.92	3.76	-0.5%
Medium	4.2	3.89	3.91	-0.3%
High	4.2	4.30	4.65	0.5%

Source: NPPC, Fourth Northwest Power Plan

The NPPC assumes electricity prices are not very sensitive to demand growth. This is because the cost of building new electricity generating capacity is not substantially greater than the cost of existing generating resources. This is true for the western power market as a whole even though there are substantial cost differences among individual light and power businesses. This is due to lower natural gas prices since the late 1970's, improvements in gas turbine technology, and substantial opportunities for efficiencies in use of existing resources. This means that as demand increases there will be little change in electricity prices.

BPA is proposing that new wholesale electricity rates for 2002 – 2006 will not substantially change from present rates.[45] This is consistent with the assumption used for the baseline revenue forecast (table 4.2.1) that electricity prices will be stable for the time period considered for this study.

The western power market influences electricity prices and demand in Washington. Washington's light and power businesses do not operate in isolation from electricity providers in other states. The electricity market in which Washington consumers participate includes western states in the United States and the Canadian provinces of British Columbia and Alberta. This corresponds to the interconnected systems of the Western Systems Coordinating Council (WSCC), which is the largest and most diverse of the ten regional councils of the North American Electric Reliability Council (NERC). NERC was formed in 1968 by utilities to promote the reliability of the electricity supply for North America. Washington light and power businesses participate in and are integral to the western power market and no single light and power business can significantly affect the market price for electricity.

[45] Bonneville Power Administration press release, August 13, 1999.

4.3 Market Price and Access

A trend in the electricity industry is that large industrial or commercial users are increasingly able to purchase electricity directly from suppliers instead of their traditional light and power business. Thereby, large users are able to purchase electricity at a lower rate as compared to the traditional rate based on the average cost to serve a customer class. Transmission and distribution is accomplished through a light and power business or through BPA. This section of the study will analyze the potential for tax revenue loss or gain depending on the amount of sales that might be lost by light and power businesses if large volume customers shift their supply source to the open market or to BPA.

The 6560 study estimated the potential cost shifts resulting from customers gaining access to the market by comparing utilities' embedded cost of generation, as estimated using the data provided by utilities for the 2831 study, with an assumed market price for power. If the market price was lower than the embedded cost of generation, all competitive sales were assumed to go to the market, and the potential loss of revenues to the utility was calculated as the increment between embedded cost and market multiplied by the lost sales. Utilities provided estimates of potential lost sales as part of the 6560 data collection effort.

The analysis for this section builds on the 6560 study by beginning with the same set of assumptions about market prices, embedded costs, and potential lost sales. Electricity demand and price forecasts from the NPPC and additional information from the US Department of Energy, Energy Information Administration are incorporated to extend the analysis from a single-year snapshot to three biennia. This also allows inclusion of data regarding light and power businesses that did not participate in the 6560 or 2831 studies.

It is important to recall that the cost-shifting analysis presented in the 6560 study was based on an examination of the *potential* for cost shifts. Therefore, the results represented an upper bound

on the amount of costs that could be shifted among electricity customers. Because it builds on the 6560 analysis, the results of this section are also an examination of the *potential* for loss of tax revenues, and should again be interpreted as an upper bound on revenues that could be lost due to changes underway in the industry. The department feels this is consistent with direction from the Legislature to examine "the extent to which existing state and local tax laws may be insufficient to protect revenue streams in light of identifiable wholesale and retail market changes."

There is one critical difference between the analysis for this study and the 6560 study. For the 6560 analysis, no assumptions were necessary about whether the customer continued to purchase electricity from its local light and power business or purchased electricity elsewhere— the light and power business could either reduce its price to the market rate and retain the customer or lose the customer and not incur the cost of purchasing power on its behalf (or be able to sell its now-surplus power at market). In either case, the revenue loss to the light and power business is bound by the increment between the cost and the market price for power.

In this study's analysis, if the customer is able to purchase power from an out-of-state supplier with no nexus in Washington State, it is assumed PUT revenue will be lost on the *entire* sale, not just the increment. In actuality this may not be true depending upon whether the customer must pay a Washington light and power business for the transmission and distribution; if so, revenues from such charges will be subject to the PUT. The potential revenue loss figures presented in this section assume that all customers that go to market purchase power from such an out-of-state supplier without nexus. This assumption is made not because of any judgment that this is the most likely scenario, but in order to illustrate the magnitude of potential losses in state and local tax revenue that *could* occur under existing state law. It must be noted that, to date, light and power businesses have almost uniformly chosen to retain their customers by selling power at or near the market price, resulting in lost PUT revenue only on the increment between cost and market.

The phenomenon of large customer access to the market is illustrated using three price scenarios. The low, medium and high market price scenarios illustrate the varying level of market access that occurs in each scenario, indicating how sensitive tax revenues can be to market structure. In the low price scenario, with a wholesale price of 19 mills/kilowatt-hour (kWh) escalating slowly after 2001, a significant fraction of industrial and large commercial customers in Washington is estimated to be better off going to the market. That proportion is reduced in the medium scenario, which features market prices starting at 25 mills. Almost no customers go to the market in the high price scenario.

In addition to the three price scenarios, two different sets of assumptions are used about which customers would have access to the market. The first scenario uses light and power business estimates of competitive load, i.e., load that might wish to gain access to the market under current laws and institutional arrangements. The utilities provided these estimates as part of the 6560 data collection. The second scenario assumes that *all* industrial and large commercial load has access to the market, and takes service from an out-of-state supplier if the price is right. This

scenario may be similar to what might occur under the "portfolio"[46] model of restructuring. The market prices and competitive loads used as inputs to the analysis are portrayed in Table 4.3.1.

The high price columns in tables 4.3.2 and 4.3.3 assume that electricity users will leave their traditional suppliers in the early years and then return to their traditional suppliers in later years. This results in zero impact for later years. In actuality, electricity users may not leave their suppliers because of possible difficulties in returning to their traditional suppliers if electricity prices changes.

Table 4.3.1

Estimated Amount of Electricity Consumption Purchased From Out-of-state Suppliers

	Market Price for Power (mills per kWh) [a]			Estimated Per 2831 Study[b]	Estimated by Light and Power Businesses [c]
Year	Low	Medium	High	(MWh)	(MWh)
2000	19.0	25.0	31.0	28,832,262	16,371,991
2001	19.0	25.0	31.0	29,207,081	16,584,827
2002	19.2	26.1	34.2	29,586,773	16,800,430
2003	19.7	27.8	36.8	29,971,401	17,018,835
2004	20.6	29.6	40.4	30,361,029	17,240,080
2005	21.4	30.0	42.2	30,755,723	17,464,201
2006	22.6	31.0	43.1	31,155,547	17,691,236

[a] Source: 6560 study; Northwest Power Planning Council, BPA Stranded Cost Simulation Model (2002-2006).
[b] Source: 2831 study.
[c] Source: 6560 study, Utility "High" Estimates.

[46] The "portfolio" model of restructuring refers in this context to a system in which some, typically large, customers gain access to the market across the distribution system of their local light and power business, while others continue to receive bundled, regulated rates. The customers who do not get market access are instead offered a choice between a "portfolio" of power supply options, typically a traditional rate, a market-based rate, and a premium rate for "green power."

Table 4.3.2

Potential Lost Revenues Based Upon Estimated Amount of Electricity Consumption Purchased From Out-of-state Suppliers

Based on Estimates by Light and Power Businesses

	Low Price		Medium Price		High Price	
Year	Lost PUT	% Total PUT	Lost PUT	% Total PUT	Lost PUT	% Total PUT
2000	$12,009,582	8.54%	$10,099,573	7.19%	$5,596,758	3.98%
2001	12,333,841	8.50%	10,372,261	7.15%	5,747,870	3.96%
2002	12,680,188	8.50%	6,440,219	4.32%	5,996,577	4.02%
2003	13,056,787	8.52%	6,671,152	4.35%	0	0.00%
2004	12,069,177	7.66%	6,182,980	3.92%	0	0.00%
2005	12,446,799	7.68%	6,362,582	3.93%	0	0.00%
2006	12,862,589	7.72%	6,566,881	3.94%	0	0.00%

Note: These estimated represent extreme values. The probability of these actually taking place is low.

Table 4.3.3

Potential Lost Revenues Based Upon Estimated Amount of Electricity Consumption Purchased From Out-of-state Suppliers

Based on Estimates Per 2831 Study

	Low Price		Medium Price		High Price	
Year	Lost PUT	% Total PUT	Lost PUT	% Total PUT	Lost PUT	% Total PUT
2000	$20,418,425	14.53%	$16,707,374	11.89%	$8,596,376	6.12%
2001	20,969,723	14.46%	17,158,473	11.83%	8,828,478	6.09%
2002	21,558,575	14.46%	11,951,113	8.01%	9,210,481	6.18%
2003	22,198,860	14.48%	12,379,655	8.08%	0	0.00%
2004	19,865,438	12.61%	9,496,788	6.03%	0	0.00%
2005	20,486,990	12.65%	9,772,650	6.03%	0	0.00%
2006	20,699,112	12.43%	10,086,444	6.06%	0	0.00%

Note: These estimated represent extreme values. The probability of these actually taking place is low.

Impact on State and Local Tax Revenues

Tables 4.3.2 and 4.3.3 show that under varying price forecasts and by varying the market access assumption, the amount of PUT revenues lost ranges from approximately $5 million to $22 million, or roughly 4 to 15 percent of revenue. The largest impact is seen in the low market price

scenario, where the market price is lower than embedded generation cost for many Washington light and power businesses. Very little impact occurs in the high market price scenario.

These estimates are intended to give some indication of the magnitude of potential revenue losses under differing sets of assumptions as set forth below. They do not represent a forecast of revenues that could be lost.

Assumptions

Any analysis of this nature will be heavily assumption-driven; this analysis is no different. Any number of factors could cause these estimates to be too high or too low. Following is a list of some of the key assumptions together with discussion of how they might be right or wrong.

Assumption	Discussion
Lost revenues are for generation costs only.	Transmission and distribution charges, and PUT collected from them, are assumed to remain the same. PUT may be lower if transmission and distribution costs cannot be recovered.
The 2831 data represents an accurate picture of how utilities would assign generation costs to competitive loads.	The 2831 study was an examination of what unbundled costs might look like under a specific allocation methodology that was common to all utilities. It is not an attempt to accurately predict how utilities would assign costs either to loads or to functions. From the study: "These reports do not document what the cost, or appropriate pricing, would be for the separate utility functions or elements of service if these were provided as separate services." Tax revenues may be higher or lower in actuality.
Competitive load customers have access to the power market over their utilities' transmission and distribution systems.	Utilities may not grant such access, and customers may not have recourse if the utility chooses not to. There will be less effect on tax revenues if access is not granted (status quo is maintained).
All competitive load customers purchase power from out-of-state marketers with no nexus in Washington.	Competitive load customers may be served by their own utility, a competing utility, an in-state marketer, an out-of-state marketer, or may generate their own power. There will be less impact on tax revenues if power is supplied from in-state generators.
The number of competitive load customers was estimated by utilities as part of the 6560 study.	Utilities may have overestimated or underestimated the number of customers that would actually have interest in obtaining power from an alternate supplier. Tax revenues may be higher or lower.
The market price forecasts are those developed by the NPPC for the Bonneville stranded cost study, and represent annual averages.	The actual market price for power varies hourly, monthly, and seasonally. This may make market prices less enticing for customers with unfavorable electricity demand profiles. There will be less impact on tax revenues if light and power customers do not leave their traditional power suppliers.

The market price for power is assumed to be a delivered cost.	The price of transmitting the power from a trading hub to an end-use customer may vary depending on where that customer is located and what types of transmission tariffs are developed in the coming years. There will be more or less tax revenues depending on how transmission services are priced.
Demand for electricity is assumed to grow at 1.3 percent per year, per the 1998 Fourth Northwest Conservation and Electric Power Plan.	Actual demand growth may be higher or lower. Tax revenues may be higher or lower.
No price elasticity of demand is assumed.	Higher prices would likely result in some price-induced conservation, resulting in lower demand in the high price scenario. This was considered to be outside the scope of this analysis.
The elasticity of embedded generation cost with respect to market price for power is assumed to be 0.1.	If the market price for power rises by 10%, the embedded cost of power is assumed to rise by 1%. This may be too high for some light and power businesses, and too low for others, depending on their power supply arrangements. Tax revenues may be higher or lower depending on the price of electricity.
No supply constraints are assumed in the model. Supply is assumed to be sufficient to meet demand.	Because electricity cannot be stored, supply must equal demand at any given instant. In reality, constraints on generation and import capacity may result in not enough supply being available, and hence load going unserved, at various times during the next several years. This is considered to be outside the scope of this analysis.
Inflation is assumed to be approximately 1.5 percent per year.	All values in Tables 1 and 2 are stated in nominal dollars.
The price of BPA power is not modeled explicitly as part of this analysis.	Many Washington utilities depend heavily on BPA for power. BPA pricing of electricity may result in greater pressure from large customers for market access.

4.4 Other Services Provided/ New Entrants In The Market

New or newly segregated services offered by light and power businesses or service providers are another trend in the electricity industry. "Other services" refers to services other than the traditional functions of generation, transmission and distribution, that might be offered by businesses that are not light and power businesses under Washington law. For the purpose of analyzing the impact of changes in the way these services are provided, we have divided them into four categories:

- Efficiency-enhancing services: new services that reduce costs.
- Energy conservation services: services that intend to reduce consumption of electricity.
- Value-added services: new services that create value.

- Unbundled services: those services that are traditionally offered as part of bundled electricity service.

Each of these categories of services affects Washington tax revenues in different ways as described below in more detail. Because the markets for these services are new and for the most part unregulated, information about the size of the industry and which companies are the market leaders is scarce. As a result, no attempt is made to construct quantitative impacts of the effects of the trend on competitive offering of these services. Instead, discussion is devoted to taxes likely to be affected, and whether revenues will increase or decrease.

Efficiency-Enhancing Services

Efficiency enhancing services are those which are designed to provide a lower-cost and/or less volatile power supply portfolio. The offer of these services is mostly confined to the wholesale market, but could be offered to end-use customers under open access. The primary examples are risk management services associated with power trading, such as futures contracts, swaps, and options.

Since efficiency-enhancing services decrease costs, and it is assumed that cost savings are generally passed on to customers, these services will reduce the tax base for the PUT and PUD privilege tax. This is because the PUT and PUD privilege tax are dependent on the price of electricity charged to customers. However, if the companies offering these services are located in Washington, they may pay Business and Occupation tax on revenues from some of these activities. B&O tax receipts might therefore increase.

Table 4.4.1

Effects on Tax Revenues by Increased Non-Light and Power Business Supply of Efficiency-Enhancing Services

Tax	Effect
PUT	Decrease
PUD Privilege — Self-Generation	No Effect
PUD Privilege Sales to End Users	Decrease
B&O Tax	Increase
Sales and UseTax	No Effect
Property Tax	No Effect

Energy Conservation Services

Investments in energy conservation can also be considered an efficiency-enhancing investment, but have some unique tax implications. Whether the investment is made by the end-user or the light and power business, or a combination, investing in energy conservation helps forestall the need for new generating capacity, reducing electricity rates and hence PUT and PUD privilege tax collections.

The current trend towards reduced investment in energy conservation will lead to higher rates for Washington electricity customers in the long run, and higher PUT and PUD revenues.[47]

The effect on state sales and use tax revenues is the reverse of the effect on PUT and PUD privilege. Because investing in energy conservation frequently involves the purchase of tangible personal property (e.g., an efficient fluorescent light bulb costs ten times more than an incandescent bulb), investments in energy conservation are subject to sales and use tax. Decreased investment in energy conservation should lead to lower sales and use tax revenues. Additionally, to the extent that reduced investment has a negative impact on Washington companies that supply energy-efficient products and services, state B&O tax collections will also be reduced.

Table 4.4.2

Effects on Tax Revenues by Decreased Light and Power Business Investment in Energy Conservation

Tax	Effect
PUT	Increase
PUD Privilege Self - Generation	No Effect
PUD Privilege - Sales to End Users	Increase
B&O Tax	Decrease
Sales and Use Tax	Decrease
Property Tax	No Effect

Value-Added Services

Value-added services are those which create value by providing a service which was previously unavailable. These new services are made possible by advances in technology and/or new institutional arrangements. Examples could include on-site energy management, enhanced power quality, uninterruptible power supply (UPS), and self-generation.

An increase in value-added services could increase PUT and/or B&O tax revenues, depending on whether the services are offered by a light and power business or a non-light and power business. As an example, an enhanced power quality service may be offered by a non-light and power business to an industrial customer. This type of service would increase B&O tax revenue. The same service offered by a light and power business and included in the price of electricity would increase PUT revenue.

[47] It is assumed here that light and power businesses have invested in conservation only when it made economic sense, i.e., when the cost of the energy conservation resource is less than building new generating capacity or making market purchases. If current trends are resulting in less investment in *above-market conservation resources only*, then the trends described in this section would be reversed, i.e., long-term costs would be decreasing, leading to lower PUT and PUD collections.

An increase in value-added services could also increase sales and use taxes, to the extent that the equipment needed to provide these services is subject to those taxes. There could also be an increase in property tax revenues, if installing this equipment results in higher assessments.

Table 4.4.3

Effects on Tax Revenues by Increased Value-Added Services

Tax	Effect
PUT	Increase
PUD Privilege - Self-Generation	No Effect
PUD Privilege - Sales to End Users	Increase
B&O Tax	Increase
Sales and Use Tax	Increase
Property Tax	Increase

Unbundling of Services

Unbundled services are those which are traditionally sold as part of bundled service, but which might be unbundled and sold separately. Examples include metering and billing. Both light and power businesses and other types of businesses may offer these services.

Unbundling of traditional services could result in a decrease in PUT and PUD privilege tax revenues and an increase in revenues that are taxable under B&O. For example, electric power metering and billing could be provided by a service business that would operate independently from the light and power business. Service income would be taxed at the appropriate B&O rate. Provision of the service by another business will not affect imposition of the PUT on the remaining gross receipts of a light and power business.

Table 4.4.4

Effects on Tax Revenue by Increased Non Light and Power Business Provision of Unbundled Services

Tax	Effect
PUT	Decrease
PUD Privilege - Self-Generation	No Effect
PUD Privilege - Sales to End Users	Decrease
B&O Tax	Increase
Sales and Use Tax	No Effect
Property Tax	No Effect

Services that potentially could be unbundled represent a relatively small portion of the cost structure of light and power businesses. From the 2831 study it was determined that customer

account servicing represents 0.8 percent and metering and billing represents 3.4 percent of the current costs for light and power businesses.[48]

4.5 Generation and Transmission

Changes in the regulation of wholesale power transmission have brought new entities into the market. Although these changes have had a great impact on the electric power industry, the tax impacts have been relatively small and should remain small at least for the time period considered for this study. That is because tax revenues from the electricity industry are based in large part on sales to the end user. Even though the wholesale power market has undergone transformation, the end-user market structure has not changed significantly.

Construction of Generation by IPPs

Increased construction of generation by IPPs and less construction by other entity types will have no net effect on sales and use tax revenue because the same amount of investment is taking place regardless of who is doing it. According to the Cogeneration Coalition of Washington, $21.6 million in sales tax was paid on the IPPs capital investment in generating capacity. If other entities had constructed this generating capacity they would have paid a similar amount in sales and use tax.

Table 4.5.1

Effects on Tax Revenues by Increased Construction by IPPs

Tax Type	Effect
PUT	No Effect
PUD Privilege - Self-Generation	No Effect
PUD Privilege - Retail Sales	No Effect
B&O Tax	No Effect
Sales and Use Tax	No Effect
Property Tax	Increase

Sale of generating assets by light and power businesses to Independent Power Producers

Light and power businesses could sell generating plants to IPPs. An example of this occurred recently with the sale of the coal-fired plant in Lewis County.

These types of sales could possibly transfer property from exempt property holders to taxable property holders, in which case there would be an increase in property taxes. Additionally, these sales could also result in the property being locally assessed as opposed to centrally assessed; on average, this would cause no property tax impact.

[48] P. 30, 2831 study.

The PUD privilege tax on self-generated power would decrease if generating assets are sold by PUDs.

The increase in sales activity increases the amount of real estate excise tax (REET) paid if the seller is subject to REET.

Although this trend focuses on sales from a light and power business to an IPP, the reverse could also be true; an IPP could sell generating assets to a light and power business. According to the technical advisory committee for this study, sales of this type have taken place. The tax effects of such a transaction would be very similar to a sale by a light and power business to an IPP. Property tax could decrease or increase, depending on the taxability of the buyers and sellers. Other tax types would not be affected, except for a one-time increase in REET.

Table 4.5.2

Effects on Tax Revenues by Sale of Generating Assets by a Light and Power Business to an IPP

Tax Type	Effect
PUT	No Effect
PUD Privilege - Self-Generation	Decrease
PUD Privilege - Retail Sales	No Effect
B&O Tax	No Effect
Sales and Use Tax	No Effect
Property Tax	Increase
REET	One Time Increase

Increase in construction of small gas turbines and other systems for self-generation

The natural gas combined cycle combustion turbine will probably remain the preferred new generating technology for the immediate and foreseeable future. The US Department of Energy, Energy Information Administration, in its 1999 Energy Outlook, estimates that 88 percent of new electricity generation from 1997 to 2020 will be combined-cycle or combustion turbines fueled by natural gas.[49]

Smaller scale gas turbine generating plants (micro turbines) may make it economical for some types of businesses to build their own generating capacity and thereby avoid purchasing power from a light and power business. A few large Washington industrial businesses and a large medical center self-generate most of their electricity needs. If the cost of generating systems continues to decline, more businesses may find it cost effective to generate their own electricity. To date, there have only been a few installations of gas turbines for self-generation; however, the

[49] Energy Information Administration, Annual Energy Outlook 1999, Report #:DOE/EIA-0383(99). http://www.eia.doe.gov/oiaf/aeo99/electricity.html

products are just now becoming commercially available. The high cost of capital investment required may discourage the purchase and installation of gas turbines for self-generation.

Other small-scale distribution systems that are either currently available or are expected to become available at some point in the next several years include solar photovoltaic panels, wind turbines, micro-hydro turbines, and fuel cells.

If accompanied by less construction of traditional, large scale power plants, an increase in systems for self-generation could have a number of tax impacts, although these impacts are expected to be very small. PUT and PUD privilege tax revenues could decrease if less electricity is sold by light and power businesses. If businesses that manufacture these systems are located in Washington, as are many, B&O tax revenues would increase as more systems are sold. Similarly, sales and use tax revenues would likewise increase to the extent such sales are not entitled to an exemption. And finally, property tax revenues would increase as these systems are added to the tax rolls.

Solar, wind, and hydropower generating systems smaller than 25 kilowatts are eligible for net metering pursuant to chapter 80.60 RCW. Under net metering, the owner of a qualifying generator may "sell" back to its electricity provider electricity generated but unused. While such systems come within the definition of a light and power business and are subject to the PUT it is unlikely that a person using net metering would incur PUT liability because of various exemptions and deductions available.

At the time of this writing, solar, wind, and hydropower generating systems smaller that 25 kilowatts and other types of fuel cells and small-scale generating systems are not in widespread use. Such generating systems are not expected to be widely used in Washington within the period considered for this study.

Table 4.5.3

Effects on Tax Revenues by Increase in Construction of Small Gas Turbines For Self-Generation

Tax Type	Effect
PUT	Decrease
PUD Privilege - Self-Generation	No Effect
PUD Privilege - Retail Sales	Decrease
B&O Tax	Increase
Sales and Use Tax	Increase
Property Tax	Increase

Associated services (such as voltage control and generation reserves) will have a higher probability of being supplied by IPPs

Associated services are generation services that have traditionally been provided by vertically integrated utilities for the purpose of operating a high-voltage transmission system. Changes in transmission system ownership and operation are opening markets for these services to IPPs and marketers who may contract for output from independently-owned generation or could manage their own generating output. It is not anticipated that there will be a net increase or decrease in ancillary services, only that there may be new business types offering such services. With a change in business types offering ancillary services, there should be no impact on PUT, but B&O tax could be paid by the new providers if they are located in Washington. Overall, changes in the offering of these services will have minimal tax impact.

Table 4.5.4

Effects on Tax Revenues by Increase in Associated Services Supplied By IPPs

Tax Type	Effect
PUT	No Effect
PUD Privilege - Self-Generation	No Effect
PUD Privilege - Retail Sales	No Effect
B&O Tax	Increase
Sales and Use Tax	No Effect
Property Tax	No Effect

Formation of a Regional Transmission Organization

In 1996, as part of the Comprehensive Review of the Northwest Energy System, the governors of the four Northwest states called for the voluntary formation of an independent grid operator (IGO). The IGO was to be regulated by FERC and would include the transmission assets of the Bonneville Power Administration and of the other owners of major transmission assets in the region. In response, the region set out to form IndeGO, a proposed independent system operator that ultimately encompassed eight states and 21 transmission-owning entities. The IndeGO negotiations ultimately failed to produce a broadly acceptable proposal.

In the spring of 1999, FERC issued a Notice of Proposed Rulemaking regarding the formation of a Regional Transmission Organization (RTO). RTOs would purchase or lease utility transmission systems, operate those systems, and would sell transmission services to light and power businesses, marketers, and other entities under FERC approved tariffs. In the proposed rule, light and power businesses were to be required to file plans for RTO formation by October, 2000. This date will probably be delayed. However, most observers expect some type of RTO to be formed within the time period covered by this study.

It is difficult to speculate on the potential tax status of an RTO. Transmission assets could be sold as real property or as personal property. Both options present different tax consequences. Or the assets could be leased by the RTO from other entities, again presenting differing consequences. At this time we are not able provide a statement on how an RTO may be taxed under Washington law other than to state that the RTO's gross revenues would probably be subject to PUT to the extent allowed by constitutional law.

4.6 General Conclusion

The only trend that could cause significant revenue loss is open market access. The low end of the *potential* state and local revenue loss is $5 million in year 2000. This assumes the high price scenario. It also assumes that load that might wish to gain access to the market under current laws and institutional arrangements would be purchased from an out-of-state supplier without nexus in Washington.

The high end *potential* state and local revenue loss is $20 million in the year 2000. This loss assumes the low price scenario and assumes that the entire large industrial and commercial load with access to the market would be purchased from an out-of-state supplier without nexus in Washington.

It should be emphasized that these are potential losses. Actual losses incurred under these scenarios would almost definitely be less and perhaps would be considerably less because the entire load at risk would not necessarily be purchased out of state.

The other trends, including those related to other services provided or new entrants in the market, and those related to generation and transmission have small positive or negative tax impacts, which in sum are insignificant.

CHAPTER 5
TAX EQUITY ANALYSIS

5.1 Introduction

This section of the study addresses the question of whether or not participants in the electricity industry are fairly taxed in relation to each other. The authorizing legislation directed the analysis to consider "whether the tax code is adequate to fairly tax new participants in the market such as brokers, marketers, aggregators, and traders." The analysis covers a broader group of participants in the electricity industry to determine if any experience a competitive advantage or disadvantage due to the tax structure currently in place.

A second goal of this analysis is to identify the cause of any competitive advantage. This is accomplished by isolating the tax effects on electricity prices from other factors unrelated to taxes.

Methodology

In order to analyze differences in tax obligations, hypothetical electricity entities were created and taxed. The hypothetical entities represent all activities in the electricity industry from generation to the sale to the final consumer. Although the entities are hypothetical they are typical of the entities they represent in Washington's electricity industry. The typical businesses were created using actual data from Washington's electricity industry.

Using a common set of assumptions about the cost structure of each entity, the study demonstrates differences in tax obligations between each entity type are shown. It was assumed that each entity has the same amount of generating capacity, that each purchases or sells electricity at the same price (except in the scenario that compares the effect on taxation of different prices), and that transmission and distribution costs are the same. By making these assumptions the study isolates and makes more readily apparent the tax effects on electricity sales.

All taxes are summed and then compared on a per kilowatt-hour and percentage of revenue basis. This gives the reader a common frame of reference to be used in each scenario. For each comparison, the amount of electricity sold and the price are assumed to be the same (except in the scenario that compares the effect of price on total residential tax bill), so that the comparison can be focused only on taxes. The number of kilowatt-hours and price is meant to represent what is sold to a typical industrial consumer in a year. Actual data from federal and local sources were used to determine typical kilowatt-hour purchases and a typical price.

Table 5.1.1

Assumed Industrial Price and Amount of Sales	
kWh	975,000
Price	$.030

Taxes that were modeled include the tax types listed in the current taxation section of the study. These taxes include PUT, local utility taxes, PUD privilege tax, B&O, property taxes, and state and local sales and use taxes. Additionally, when appropriate, out-of-state income taxes are modeled.

How the Scenarios Were Chosen

Instead of covering all the almost infinite ways that electricity can go through the process of generation to final sale to the consumer, we chose a limited number of scenarios. The scenarios represent the ways in which there are differences in taxes and, therefore, possible inequities.

Feedback from the Technical Advisory Committee and from industry representatives was incorporated in determining scenarios.

The Scenarios

The scenarios are grouped for comparison purposes. Direct comparisons cannot be made between all groups, because some groups only focus on particular transactions. However, indirect comparisons can be made by putting certain tax differences in perspective by comparing them with other tax differences.

5.2 Bundled Electricity Service
Compares the range of taxes implicit in the purchase of electricity from the various types of local light and power businesses.

5.3 The Effect of Price on Total Residential Tax Bill T
This scenario demonstrates how price effects the overall tax burden.

5.4 Competitive Sale to End-User
Models the incremental sale to an end-user, ignoring distribution, transportation, and other fixed costs.

5.5 Out-of-state Sale
Focuses on the sale of electricity to customers in other states.

5.6 Unbundled Services
Illustrates the tax consequences of unbundling, where associated services such as metering and billing are provided by businesses other than the light and power business**.**

5.7 Sales for Resale
This comparison illustrates the tax impact of the sale of electricity for resale based upon the type of purchaser.

5.2 Bundled Electricity Service

This comparison focuses on different tax impacts experienced by consumers for electricity purchased from and delivered by their local light and power business. Also included in the comparison is the special case of a direct service industry (DSI) that can avoid light and power

businesses altogether by purchasing electricity on the wholesale market from an out-of-state provider to be delivered over BPA lines.

In this comparison a large industrial customer purchases electricity from the following entities:

- IOU which generates its own electricity
- IOU with no generation capacity
- Municipal light and power business generating electricity with a local turbine
- Municipal light and power business with a hydro plant in another county
- Municipal light and power business with no generating capacity
- Mutual/Cooperative which generates its own electricity
- Mutual/Cooperative with no generation capacity
- PUD which purchased the electricity on the wholesale market
- PUD which generated the electricity itself
- Large industrial customer which generates its own electricity
- DSI which buys electricity directly from the BPA

For the cases where the entity has no generation capacity, it is assumed that the electricity is purchased from and transmitted by the BPA.

Table 5.2.1

Bundled Electricity Service
Focus: Purchases From Different Types of Light and Power Businesses

Large industrial customer purchases electricity from:	Taxes		
	Total $	% of Gross Sales	Cents per kWh
Investor Owned Utility (generates own electricity)	$4,640	15.89%	0.48
Investor Owned Utility (with no generation capacity)	3,454	11.83%	0.35
Municipal L&P (generated by local turbine)[1]	3,427	11.73%	0.35
Municipal L&P (w/ hydro plant in another county)[2]	3,719	12.73%	0.38
Municipal L&P (with no generation capacity)	2,984	10.22%	0.31
Mutual/Cooperative (generates own electricity)	4,640	15.89%	0.48
Mutual/Cooperative (with no generation capacity)	3,454	11.83%	0.35
PUD (purchases electricity on wholesale market)	3,609	12.36%	0.37
PUD (generates electricity for itself)	4,260	14.59%	0.44
Large Industrial Customer; generates own electricity[3]	1,937	NA	0.20
DSI Which Buys from an Out-of-state Seller, such as the BPA	0	0	0

Assumptions and notes for Table 5.2.1

Annual electricity purchased = 975,000 kWh[3]
Price industrial user pays = 3 cents per kWh[3]
Expenditure on electricity = $29,250

1. Generated by a turbine within the city limits; no voluntary and directed compensatory payments made.
2. Includes reported voluntary and directed compensatory payments for hydro plants.
3. Electricity purchased and price do not apply to the customer's self generated electricity.

Table 5.2.2

Bundled Electricity Service: Detail by Tax
Focus: Purchases From Different Types of Light and Power Businesses

		State Taxes					Local Taxes		
Large industrial customer purchases electricity from:	**Taxes Total**	**PUT**	**PUD**	**B&O or in-come**	**Property**	**Sales/ Use**	**PUT**	**Property**	**Sales/ Use**
Investor Owned Utility (generates own electricity)	4,640	1,131	0	0	304	574	1,571	909	150
Investor Owned Utility (with no generation capacity)	3,454	1,131	0	0	118	223	1,571	353	58
Municipal L&P (electricity generated by local turbine)	3,427	1,131	0	0	0	574	1,571	0	150
Municipal L&P (hydro plant in another county)	3,719	1,131	0	0	0	574	1,571	292	150
Municipal L&P (with no generation capacity)	2,984	1,131	0	0	0	223	1,571	0	58
Mutual/Cooperative (generates own electricity)	4,640	1,131	0	0	304	574	1,571	909	150
Mutual/Cooperative (with no generation capacity)	3,454	1,131	0	0	118	223	1,571	353	58
PUD (purchases power on wholesale market)	3,609	1,131	625	0	0	223	1,571	0	58
PUD (generates electricity for itself)	4,260	1,131	834	0	0	574	1,571	0	150
Large Industrial Customer; generates own electricity[3]	1,937	0	0	0	304	574	0	909	150
DSI Who Buys from an Out-of-state Seller, such as the BPA	0	0	0	0	0	0	0	0	0

Assumptions and notes for Table 5.2.2 .

	State Tax Rates					Local Tax Rates .		
1999 Tax Rates, by Tax	PUT	PUD	B&O	Prop.	Sales	PUT	Prop.	Sales
	3.873%	2.14%	1.5%	3.4	6.5%	5.38%	10.16	1.7%

-Effective PUD rate for self generated power = 0.000214 per kWh,
-Property tax rates are stated in $ per $1,000 of assessed value, and
-Municipal voluntary and directed compensatory payments = 0.03 cents/kWh.

Bundled Electricity Service Conclusions

The analysis illustrates that there are differences in the amount of tax obligation for different entity types. The biggest difference is that publicly-owned light and power businesses do not pay property taxes on generating facilities and other assets as do IOUs and mutuals and cooperatives. Instead, PUDs pay the PUD privilege tax, and municipally-owned light and power businesses with generating facilities in other counties pay voluntary and directed compensatory payments. While these taxes and payments help to reduce the differences, IOUs that own generating facilities are still taxed more highly than public entities.

This difference between IOUs and publicly-owned entities becomes much less when the light and power businesses do not own generating facilities. In this instance, PUDs have the highest tax obligation. This is because the PUD privilege tax on sales results in a higher effective tax rate for the PUDs than for municipals or IOUs.

Another significant difference in the tax obligations of light and power businesses is between entities that generate electricity themselves and those that buy electricity from the BPA. The difference in these cases is equal to the amortized sales/use taxes and property taxes on the generation capacity for those entities that self generate. Since the BPA does not pay property tax in the state of Washington, electricity generated by the BPA escapes the additional cost of property taxation related to generation.

Although there are differences in taxation, the differences are all well within the range of variance in other costs that drive prices. Other costs vary considerably from entity type to entity type and even amongst individual businesses within a particular entity type. The type and vintage of generation assets, the nature of its service territory, i.e. rural versus urban (low density versus high density) or open versus forested, and a myriad of other factors result in price differences. Looking at the range of average weighted prices by business type, the prices vary from $3.56 to $5.40 per kilowatt-hour. (The $1.52 per kilowatt-hour difference is between the weighted average per entity type. Differences between individual businesses can be much larger).

Similarly, the differences between tax burdens by business type range from .31 cents to .48 cents for light and power businesses. Therefore, the difference in price due to taxes is only about 10 percent of the difference in price due to other factors. Since differences between individual businesses are larger, differences due to taxes are even less significant.

Scenario 5.3 The Effect of Price on Total Residential Tax Bill

This scenario demonstrates how different prices effect the overall tax obligation. Since the PUT tax is based on price, differences in prices cause differences in tax. This scenario compares a PUD which sells electricity to residential customers at a high versus a low price. The high and low prices represent extreme prices as recorded in the 6560 study. The total tax obligation is compared in order to put the tax differences caused by price into perspective. Only one entity type is compared in order to focus on the tax differences caused only by prices.

Table 5.3.1

Effect of Prices on Total Residential Tax Bill
Focus: Residential Customer Purchases Power From a Low Price and a High Price PUD

A residential customer purchases power from:	Annual Taxes		
	Total $	% of Gross Sales	Cents per kWh
A Low Priced PUD	61	14.6%	0.44
A High Priced PUD	93	13.3%	0.67

Assumptions and notes for Table 5.3.1

-Annual electricity purchased = 14,000 kWh

-Low Price PUD

Price residence pays = 3 cents per kWh

Expenditure on electricity = $420

-High Price PUD

Price residence pays = 5 cents per kWh

Expenditure on electricity = $700

Table 5.3.2

Effect of Prices on Total Residential Tax Bill: Detail by Tax Focus: Residential Customer Purchases Power From a Low Price and a High Price PUD									
		State Taxes					Local Taxes		
A residential customer purchases power from:	**Total Taxes**	**PUT**	**PUD**	**B&O or in-come**	**Prop**	**Sales/ Use**	**PUT**	**Prop**	**Sales/ Use**
A Low Priced PUD	61	16	12	0	0	8	23	0	2
A High Priced PUD	93	27	18	0	0	8	38	0	2

Effective PUD rate for self generated power = 0.000214 per kWh.

The Effect of Price on Total Residential Tax Bill Conclusions

Higher prices cause a higher tax burden. However, the difference in taxes is somewhat less than the difference in price. This is because in addition to PUT and PUD privilege tax which is based on prices, there are other taxes that do not vary with prices.

For example: a 67 percent increase in price (exemplified by increasing the price from 3 cents per kilowatt-hour to 5 cents per kilowatt-hour) causes a 52 percent increase in total tax burden. Since state and local PUT taxes are the largest taxes paid by all types of light and power businesses, differences in prices similarly cause large differences in tax burden for all types of light and power businesses. Since prices vary considerably (from 2.15 cents to 6.17 cents per kilowatt-hour for residential customers in 1996), the tax differences can be large. The following table, which compares the weighted average price per entity type illustrates some of the variation in prices.

Table 5.3.3

Weighted Average Residential Prices by Entity Type, 1996	
Utility Type	**Price, Cents per kWh**
Municipal	4.38
Cooperative	5.18
PUD	4.41
Investor-Owned	5.63

Source: Department of Energy, Energy Information Administration, 1996.

5.4 Competitive Sale to End-User

The focus of this analysis is the incremental sale, ignoring distribution, transportation, and other fixed costs. In this comparison it is assumed that each of the entities has excess generating capacity and is selling surplus electricity, or is purchasing electricity on the open market and reselling the electricity. Furthermore, it is assumed that fixed costs are recovered by their regular

customers. Therefore, fixed-cost taxes, such as sales, use, PUD (on generation) and property taxes, are not included in this comparison.

Taxes modeled are the Washington State PUT, B&O, tax and the corporate income tax in other states. Also included in the analysis is that portion of the PUD privilege tax that applies to sales of electricity; even though the PUD privilege tax is intended to compensate for property taxes, it is structured as a tax on revenues and therefore is included in this incremental analysis**.**

Table 5.4.1

Competitive Sale to End-User
Focus: This Analysis is the Incremental Sale, it Ignores Distribution, Transportation, and Other Fixed Costs

Large industrial customer purchases electricity from:	Taxes		
	Total $	% of Gross Sales	Cents per kWh
Investor Owned Utility	2,702	9.25%	0.277
Municipal Light and Power	2,702	9.25%	0.277
Mutual/Cooperative Light and Power	2,702	9.25%	0.277
PUD	3,328	11.39%	0.341
Non- Light and Power who takes title	438	1.50%	0.045
Out-of-state Marketer in Oregon	39	0.13%	0.004
Out-of-state Marketer in Idaho	47	0.16%	0.005
Out-of-state Marketer in Texas	49	0.17%	0.005
Federal Entity	0	0	0

Assumptions and notes for Table 5.4.1

Annual electricity purchased = 975,000 kWh
Price industrial user pays = 3 cents per kWh
Expenditure on electricity = $29,250

- in this scenario an end-user is presumed to have access to market prices.
- the PUD privilege tax is intended to compensate for property taxes. Since it is based on gross receipts, it is not a fixed cost and has been included here. Only that portion which applies to the sale of electricity has been included; the portion that applies to self-generated power is ignored since the assumption of surplus power implies that this portion of tax is not marginal to this sale.
- the buyer is assumed to be outside of any municipality levying a local PUT. However, a municipal light and power business may still levy the city PUT on its sales outside the municipality.

Table 5.4.2

Competitive Sale to End-User: Detail by Tax									
		State Taxes					Local Taxes		
Large industrial customer purchases electricity from:	**Total Taxes**	**PUT**	**PUD**	**B&O or in-come**	**Prop**	**Sales/ Use**	**PUT**	**Prop**	**Sales/ Use**
Investor Owned Utility	2,702	1,131	0	0	NA	NA	1,571	NA	NA
Municipal Light and Power	2,702	1,131	0	0	NA	NA	1,571	NA	NA
Mutual/Cooperative L&P	2,702	1,131	0	0	NA	NA	1,571	NA	NA
PUD	3,328	1,131	625	0	NA	NA	1,571	NA	NA
Non-L&P who takes title (pays B&O in WA)	438	0	0	438	NA	NA	0	NA	NA
Out-of-state Marketer in Oregon (corp. income tax)	39	0	0	39	NA	NA	0	NA	NA
Out-of-state Marketer in Idaho (corp. income tax)	47	0	0	47	NA	NA	0	NA	NA
Out-of-state Marketer in Texas (corp. income tax)	49	0	0	49	NA	NA	0	NA	NA
Federal Entity	0	0	0	0	NA	NA	0	NA	NA

Assumptions and notes for Table 5.4.2 .

	State Tax Rates					Local Tax Rates .		
1999 Tax Rates, by Tax	PUT	PUD	B&O	Prop.	Sales	PUT	Prop.	Sales
	3.873%	2.14%	1.5%	3.4	6.5%	5.38%	10.2	1.7%

-Marketers' profits are assumed to be 2% of gross revenues, or $584,
-Oregon income tax rate = 6.6%,
-Idaho income tax rate = 8.0%, and
-Texas income tax rate = 8.4%.
-NA means in this table that the tax was not applicable and hence not modeled.

Competitive Sales to End-User Conclusions

In this scenario, out-of-state marketers enjoy a competitive advantage that ranges from over 1 percent to about 11.4 percent of the gross value of the sale compared to Washington entities. Although the out-of-state marketers pay income tax on their profits, the income tax is small compared to the B&O service tax paid by non-light and power businesses (such as marketers) and the public utility tax paid by light and power businesses. PUDs suffer a further disadvantage relative to other light and power businesses due to the structure of the PUD privilege tax as a tax on gross revenue.

This scenario describes a sale of surplus energy in which all other costs have been recovered via the light and power businesses' regular customers. The electricity would be sold in a competitive market and the price would be determined by the market. The price received for the electricity would therefore essentially be the same regardless of the costs incurred by the sellers. In-state

light and power businesses therefore face a significant disadvantage when the sale is made by incurring tax costs of up to 11.4 percent higher than out-of-state sellers.

5.5 Out-of-state Sale

This comparison focuses on the question of whether an in-state electricity seller making a sale to an out-of-state end user is at a competitive disadvantage in relation to an electricity seller located out-of-state.

In this comparison, the out-of-state consumer purchases electricity from each of the following:

- PUD
- Municipal Electric
- IOU
- Mutual/Cooperative
- In-state marketer
- Out-of-state seller without nexus

In order to focus on the in-state/out-of-state question, it is assumed that each of the entities is selling surplus generation. Furthermore, it is assumed that their fixed costs are recovered from their regular customers. Therefore, fixed cost taxes, such as sales, use, PUD and property taxes, are not included in this comparison.

Taxes in this comparison include: PUT, B&O and income tax from other states.

Table 5.5.1

Out-of-state Sale
Focus: In-State Versus Out-of-state Sale of Electricity to an End-User

		Taxes	
Out-of-state large user purchases electricity from:	**Total $**	**% of Gross Sales**	**Cents per kWh**
Investor Owned Utility	0	0.00%	
Municipal L&P that levies local PUT on exports	1,571	5.38%	0.16
Municipal Light and Power that does not levy local PUT on exports	0	0.00%	0.00
Mutual/Cooperative Light and Power	0	0.00%	0.00
PUD (self generates power)	625	2.14%	0.06
Non-L&P who takes title	438	1.50%	0.04
Out-of-state Marketer in Oregon	39	0.13%	0.00
Out-of-state Marketer in Idaho	47	0.16%	0.00
Out-of-state Marketer in Texas	49	0.17%	0.01

Assumptions and notes for Table 5.5.1
Ignores fixed cost, including distribution and transmission.
Annual electricity purchased = 975,000 kWh

Price industrial user pays = 3 cents per kWh
Expenditure on electricity = $29,250

Table 5.5.2

Out-of-state Sale: Detail by Tax
Focus: In-State Versus Out-of-state Sale of Electricity To An End-User

		State Taxes					Local Taxes		
Out -of-state large user purchases electricity from:	**Total Taxes**	**PUT**	**PUD**	**B&O / Inc**	**Prop**	**Sales/ Use**	**PUT**	**Prop**	**Sales/ Use**
Investor Owned Utility	0	0	0	0	0	0	0	0	0
Municipal L&P that levies the local PUT on exports	1,571	0	0	0	0	0	1,571	0	0
Municipal L&P that **does not** levy a PUT on exports	0	0	0	0	0	0	0	0	0
Mutual/Cooperative L&P	0	0	0	0	0	0	0	0	0
PUD (self generates power)	625	0	625	0	0	0	0	0	0
Non-L&P (i.e. a marketer) who takes title	438	NA	NA	438	0	0	0	0	0
Out-of-state Marketer in Oregon (corp. income tax)	39	0	0	39	0	0	0	0	0
Out-of-state Marketer in Idaho (corp. income tax)	47	0	0	47	0	0	0	0	0
Out-of-state Marketer in Texas (corp. income tax)	47	0	0	47	0	0	0	0	0

Assumptions and notes for Table 5.5.2 .

	State Tax Rates					Local Tax Rates .		
1999 Tax Rates, by Tax	PUT	PUD	B&O	Prop.	Sales	PUT	Prop.	Sales
	NA	2.14%	1.5%	NA	NA	5.38%	NA	NA

-Marketers' profits are assumed to be 2% of gross revenues, or $584,
-Oregon income tax rate = 6.6%,
-Idaho income tax rate = 8.0%, and
-Texas income tax rate = 8.4%.

Out-of-state Sale Conclusions

Because of the state PUT deduction for sales for resale or consumption out of state, most light and power businesses do not face a competitive disadvantage compared to sales made by either in-state or out-of-state electricity sellers. Municipals located in cities that do not have a local PUT exemption on exports are at a competitive disadvantage in relation to other entities that are not subject to a tax on exported electricity.

PUDs face a competitive disadvantage because a portion of the PUD tax is paid on the amount of self-generated electricity sold.

In this example, the in-state non-light and power business (e.g. a marketer) takes title to the electricity and therefore pays B&O tax on the entire value of the sale. For this scenario, the B&O tax liability is a little over 1% greater than the state income taxes modeled paid by the out-of-state marketers.

5.6 Unbundled Services

This comparison illustrates the tax consequences of unbundling associated electricity services and the separate tax incidences for each component. The two examples of unbundling considered here are:

1. An end-user purchases electricity from a marketer. Delivery, metering and billing are done by a light and power business.
2. An end-user purchases electricity from a marketer. Delivery is done by a light and power business, metering and billing is done by the marketer.

This comparison includes all taxes:

- PUT, State and Local
- PUD
- B&O (Service rate paid by separate entity for metering and billing)
- Property
- Sales and Use, State and Local

This comparison is done for only one type of light and power business, (an IOU), for simplification. The conclusions would be the same for any light and power business.

Notes: It is assumed that the light and power business charges a reduced price for the unbundled service. Billing and metering represent 3.4 percent of total light and power business cost.

Table 5.6.1

Unbundled Services **Focus: Unbundling Associated Electricity Services**			
Large industrial customer purchases:	**Taxes**		
	Total $	**% of gross Sales**	**Cents per kWh**
a) Bundled Metering and Billing			
i. Delivery from a Light and Power	1,603	5.49%	0.164
ii. Metering and Billing from a L&P	198	0.68%	0.020
iii. Power from a non-L&P who takes title	1,454	4.98%	0.149
Total Paid	3,255	11.14%	0.334
b) Unbundled Metering and Billing			
i. Delivery from a Light and Power	1,603	5.49%	0.164
ii. Metering&Billing; non-L&P who takes title	101	0.35%	0.010
iii. Power from a non-L&P who takes title	1,454	4.98%	0.149
Total Paid	3,158	10.81%	0.324

Assumptions and notes for Table 5.6.1

Annual electricity purchased = 975,000 kWh
Price industrial user pays = 3 cents per kWh
Expenditure on electricity = $29,250

-It is assumed that the light and power business charges a reduced price for the unbundled service.
-Of total cost, billing and metering are assumed to be 4.3%, delivery 34.5%, and power 61.2 percent.
-In this scenario an end user is assumed to have access to market prices.
-It is assumed that the light and power business charges a reduced price for the unbundled service. Billing and metering represent 3.4 percent of total light and power business cost.

Table 5.6.2

Unbundled Services: Detail by Tax
Focus: Unbundling Associated Electricity Services

		State Taxes					Local Taxes		
Large Industrial Customer purchases:	**Total Taxes**	**PUT**	**PUD**	**B&O / Inc**	**Prop.**	**Sales /Use**	**PUT**	**Prop.**	**Sales /Use**
a)Bundled Metering/Billing									
i. Delivery by a L&P	1,603	391	0	0	105	198	543	314	52
ii. Metering & Billing from an L&P	198	48	0	0	13	25	67	39	6
iii. Power from non-L&P who takes title	1,454	0	0	268	186	351	0	556	92
Total Paid	3,255	439	0	268	304	574	610	909	150
b) Un-bundled Metering and Billing									
i. Delivery by a L&P	1,603	391	0	0	105	198	543	314	52
ii. Metering & Billing: non-L&P who takes title	101	0	0	19	13	25	0	39	6
iii. Power from non-L&P who takes title	1,454	0	0	268	186	351	0	556	92
Total Paid	3,158	391	0	287	304	574	543	909	150

Assumptions and notes for Table 5.6.2

	State Tax Rates					Local Tax Rates		
1999 Tax Rates, by Tax	PUT	B&O	PUD	Prop.	Sales	PUT	Prop.	Sales
	3.873%	2.14%	1.5%	3.4	6.5%	5.38%	10.16	1.7%

-Property tax rates are stated in $ per $1,000 of assessed value.

Unbundled Services Conclusion

Having a marketer (or other non light and power business) provide metering and billing services reduces taxes associated with metering and billing by almost 50 percent. This may be enough of an incentive to encourage some unbundling of services. However, in comparing the total tax bill, unbundling metering and billing services only decreases taxes by 3 percent.

5.7 Sales for Resale by an In-state Light and Power

This comparison illustrates the tax impact of the sales for resale by an in-state light and power business based upon the type of purchaser. The types of activities considered are:

In-state light and power business sells to

- In-state marketer
- Out-of-state marketer
- In-state light and power business

Because the in-state light and power business in each of these comparisons is the same, the comparison does not include fixed cost taxes (sales, use, property, PUD on generation), but focuses on the differences of the sale for resale transaction only.

Table 5.7.1

Sales for Resale
Focus: Sales of Electricity Based on Purchaser Type

In-state light and power business sells electricity to	Taxes		
	Total $	% of gross sales	Cents per kWh
A Marketer	1,131	3.87%	0.12
A Light and Power Business	NA	0.00%	NA
An Out-of-state Marketer:	NA	0.00%	NA

Assumptions and notes for Table 5.7.1

Annual electricity purchased = 975,000 kWh
Price industrial user pays = 3 cents per kWh
Expenditure on electricity = $29,250
Note: the generator is the same for all, so only PUT is modeled

Table 5.7.2

Sales for Resale: Detail by Tax
Focus: Sales of Electricity Based on Purchaser Type

	State Taxes						Local Taxes		
In-State Light and Power Business sells electricity to:	Total Taxes	PUT	PUD	B&O / Inc	Prop	Sales/ Use	PUT	Prop	Sales/ Use
A Marketer	1,131	1,131	0	0	NA	NA	0	NA	NA
A Light and Power Business	0	0	0	0	NA	NA	0	NA	NA
An Out-of-state Marketer	0	0	0	0	NA	NA	0	NA	NA

Assumptions and notes for Table 5.7.2

	State Tax Rates					Local Tax Rates		
1999 Tax Rates, by Tax	PUT	B&O	PUD	Prop.	Sales	PUT	Prop.	Sales
	3.873%	1.5%	2.14%	NA	NA	5.38%	NA	NA

Sales for Resale Conclusion

In-state light and power businesses face a competitive disadvantage of nearly 4 percent compared to out-of-state marketers. This is because deduction is allowed for amounts derived from the sale of electricity from one light and power business to another for resale within Washington State. This deduction does not apply to sales by a light and power business to a non-light and power business such as a marketer.

5.8 General Conclusions

The scenario in section 5.2 demonstrates that there are differences in taxation between entities. However, any differences in electricity prices that are caused by taxation are well within the range of differences in prices caused by variance in other costs. Taxes represent only about 10 percent of the total variation in prices when comparing average prices by entity type. Because the differences in price caused by taxes is well within the range of differences caused by other factors, certain entities do not suffer a serious competitive disadvantage caused by taxes alone in this scenario. Since the general conclusions should hold for similar sales to residential customers as well as for industrial customers, the conclusions from this scenario cover most of the electricity sales in Washington State.

However, taxes cause some Washington light and power businesses a serious competitive disadvantage in the deregulated wholesale environment as modeled in the scenario in section 5.3. The deregulated wholesale environment enables new types of entities (marketers, out-of-state businesses) to compete with Washington light and power businesses. Since the PUT and PUD privilege tax applies only to Washington light and power businesses these taxes place Washington businesses at a significant disadvantage against out-of-state entities that are successful at avoiding establishing nexus in Washington. This advantage enjoyed by out-of-state businesses can range from 1 percent to 11.4 percent of gross sales. This tax advantage could be considerable enough to encourage businesses to locate outside of Washington

CHAPTER 6
OPTIONS

6.1 Introduction

The statutory assignment to the Department calls for this report to offer tax policy options in accordance with several criteria. In developing the options to be included, the study team looked to various resources. Besides drawing on its own expertise, the study team researched the tax changes enacted by states that restructured their electricity retail markets over the last three years. The study team also considered the suggestions made by study participants, stakeholders and interested parties. As a result, four categories of tax structures, each with varying options, are presented in this chapter.

In addition to presenting the tax options, this report provides two lists of criteria and principles for evaluating options. The first list is the criteria from the authorizing legislation and the second list concerns general tax policy principles. While no list can be said to offer the final word on matters of tax policy, there are criteria and principles that can serve as an analytic framework for evaluating tax policy choices.

6.2 Criteria From the Authorizing Legislation

The legislative assignment to the Department calls for this report to specify options for change that would:

- Avoid revenue loss;
- Promote competitive neutrality; and
- Encourage economic development within the electricity industry.

Each of these criteria, when considered separately, offers a valuable perspective on the merits of a given tax policy choice. When a given policy is considered in light of all three criteria, additional perspectives emerge. Since combinations of policies may work together differently than they would work separately, we have not eliminated any option based on its failure to meet one particular criterion.

Avoid revenue loss: This criterion measures the revenue stream associated with a particular tax or overall tax structure. The study team understands that one of the issues of concern to policymakers is whether changes in business practices in the electricity industry may potentially reduce the revenues generated by current taxes on particular activities. Options for change that avoid revenue loss can therefore be understood to be ones which alter the tax structure in order to maintain a consistent revenue stream in an evolving industry.

The economic analysis of trends in the electricity industry detailed in Chapter 4 shows that the greatest threat to the revenue stream is from out-of-state providers without nexus making sales into Washington.

Promote competitive neutrality: This criterion measures the relative impact of the tax on similarly situated persons. As a general rule, the tax system should treat people and businesses in similar circumstances the same. However, in certain instances, policymakers may decide that

other policy considerations merit higher priority. In those cases, corrective measures that "improve" the functioning of the market from that point of view have been woven into the tax code. The study team understands that one of the concerns of policymakers is that the tax structure over time has developed disparities that unintentionally afford different tax treatment to entities engaged in similar activities. Options for change that promote competitive neutrality can therefore be understood to be ones that reflect a full understanding of current and likely business activity and do not influence market structure in any significant manner.

The economic analysis in Chapter 5 shows that competitive neutrality is negatively effected by Washington's tax structure in two ways. First, the tax structure gives out-of-state providers a competitive advantage over in-state providers, both light and power businesses and non-light and power businesses. Second, the tax structure gives non-light and power businesses a competitive advantage over light and power businesses on sales of electricity to in-state consumers. On the other hand, on sales of electricity for resale either in Washington or to out-of-state non-light and power businesses are at a competitive advantage as compared to light and power businesses.

Encourage economic development within the electricity industry: This criterion measures the impact a tax or tax system has on the evolution of the business environment in this state. The study team understands that policymakers are seeking advice with respect to the impact of tax policy choices on business opportunities in the electricity industry. Options for change that encourage economic development are ones that at least do not impede or provide unintended obstacles to the creation of new business structures and activities because of state or local tax obligations. An additional avenue to encourage economic development is to allow certain tax advantages to new business activities. At some point pursuit of such policies may yield conflicts with other criteria used in this report, particularly promotion of competitive neutrality.

6.3 General Tax Policy Principles

The following criteria represent the Department's perspective on additional characteristics of a desirable tax structure. This section identifies the general tenets of a sound tax system and offers policymakers and other interested parties a set of criteria that can be used to formulate their own position on any specific tax proposal. Naturally, discussions regarding a "fair" or "equitable" tax system can be highly subjective and depend heavily on individual circumstances and point of view. However, certain principles are useful in framing an approach to policy evaluation that will yield clear issues and choices.

Broad Base: A broad tax base assures that all individuals, business activities, and sectors of the economy contribute to funding the services provided by the state and its political subdivisions. When financial circumstances permit, everyone – businesses and individuals – should make some contribution for the cost of government. A broad base permits lower tax rates.

Stability: Revenue collections should not fluctuate dramatically, and receipts should be relatively easy to forecast.

Cost of compliance (Taxpayer): Any tax should be based on a single, easily understood activity or business event so that potential taxpayers can self-assess and pay the tax correctly. The tax rate should be simple and direct (with minimal exemptions and deductions) so that taxpayers can easily and accurately calculate how much they owe.

Cost of administration (Government): The taxpayer must be easily identifiable. Preferably the base should be businesses and individuals already registered with the agency responsible for tax collection. For new taxes, effective dates and tax reporting dates should be consistent with existing statutes. Sufficient lead time in new tax programs should be allocated to allow implementation plans to be organized and followed.

6.4. Analysis of Options

The following discussion examines various alternative tax structures as measured against the criteria and principles of sections 6.2 and 6.3. The options are organized according to different fundamental approaches to a tax structure.

- A tax structure that derives revenues exclusively from taxes on business activities.
- A tax structure that derives revenues exclusively from consumers.
- A tax structure that operates in a manner to manipulate or shape various features of the industry in order to meet perceived "public purposes" not adequately addressed by a free market.
- A tax structure that derives revenues from both business activities and the consumer.

6.5 Business Activity Based Structure

One option for a tax structure would be to derive revenue from taxation of the business activity within the industry. There are elements of such a structure at work in the current tax system with the imposition of the PUT and B&O tax on businesses in the electricity industry. A business activity based tax structure could be based upon the value of the electricity sold or the volume of the electricity transacted over a given period of time. A pure system based on taxation of business activity would not have any tax on the consumption of electricity by the end-user. A business activity tax could be a tax on the privilege of conducting the business as a whole in Washington. Alternatively, it could be a tax on the privilege of performing a specific activity of the business such as selling, trading, distributing, or generating.

Features of options that may help meet the criteria include the following:

- Retain the PUT and modify it by:
  - Repealing the deduction for sales of electricity for resale or consumption outside this state;
  - Repealing the deduction for sales of electricity for resale between light and power businesses.
- Tax or exempt all sales of electricity for resale similarly, regardless of who is the seller and/or purchaser.
- Tax all futures trading of electricity the same.

Criteria

Avoid Revenue Loss. The PUT has been a consistent source of revenue for the state, however the trends analysis in chapter 4 indicates some cause for concern. As detailed in this report, the potential exists for a loss of somewhere between $5 million and $22 million in PUT revenues if

certain business scenarios develop. Additionally, the nature of the business entities participating in the electricity market is changing. Due to the physical mobility of businesses in a growing segment of this industry, a risk to the revenue stream is posed by exclusive reliance on this type of tax. Mitigation for this loss could be accomplished by imposing a use tax on electricity consumed by in-state end-users, but this would deviate from a pure tax system based on only business activity.

Promote Competitive Neutrality. The current business taxes (PUT and B&O) treat similar business activities performed by different entities differently. For example the various ways in which electricity may be traded or sold, either in the wholesale market or to the end-user, by light and power businesses and by non-light and power businesses, such as marketers, are taxed differently. Competitive neutrality may be obtained by describing with specificity the particular type of sale or trade activity and taxing the specific activity so each business that performs the specific activity are taxed similarly. However, such taxation on specifically described discrete activities may impose a tax where one has not previously been imposed. In the electricity industry, because of the relative ease of establishing a trading business outside of Washington that competes with in-state entities, attempting to promote competitive neutrality may negatively impact the revenue stream. Apportionment of revenues derived from activity in this state could mitigate this loss but those revenues may be less than those generated under current law.

Encourage Economic Development within the Electricity Industry. The traditional forms of economic development usually include preferential tax treatment schemes for certain industry groups and market participants. While such preferential tax treatment may encourage economic development, such policy choices pose the potential of revenue losses and may be contrary to competitive neutrality.

Broad Base. The tax base would be as broad as the number of businesses with nexus in this state. However, a major segment of the market, consumers, would not be included in the base.

Stability. This system would be as stable as the level of business activity taxable in this state.

Cost of compliance (Taxpayer). Burdens on taxpayers would be no greater than current law, which includes several business taxes for which persons are responsible. To the degree exemptions and deductions are crafted to address specific tax treatments, the system would become more complicated and difficult to comply with.

Cost of Compliance (Government). The burdens on the government agencies responsible for collection and enforcement of the tax would not be significantly different than today.

Stakeholder Comments

Some stakeholders are very concerned about the economic implications of imposing taxes on wholesale (sales for resale) transactions. Their perspective is that a tax on wholesale transactions will increase the cost of power, could ultimately make Northwest power non-competitive with energy produced in other regions, and propose it is not necessary to achieving the stated principles of the report.

6.6 A Consumption Based Tax Structure

Another option would be to impose taxes exclusively on the consumption of electricity by in-state end-users. Under this structure, there would be no PUT or B&O tax on business activities. Instead, sales and use taxes would apply to consumers of electricity. The system could be modified to tax consumers based upon the volume of the electricity consumed or upon the value (price) paid for the commodity.

Features of options that may help meet the criteria include the following:

- Reverse index[50] the tax rate to mitigate impact to DSI and other users of significant amounts of electricity.
- Allow a residential sales and use exemption on electricity similar to the exemption allowed for residential telephone service.

Criteria

Avoid Revenue Loss. Tax rates could be adjusted to maintain current levels of revenue. However, tax burdens would shift substantially. In order to mitigate this shift and protect certain classes of consumers who may be particularly vulnerable, a set of exemptions, thresholds and indexes could be crafted to relieve the burden in a deliberate manner. For example, a residential exemption would reduce the tax shift impacting households. Similarly, a reverse index would mitigate the impact on DSIs and those industries that consume substantial amounts of electricity. However, these actions would work against the revenue stream and at some point may conflict with the principals of neutrality and economic development.

Promote Competitive Neutrality. From the perspective of businesses in the electricity market, a system that uniformly imposed no taxes on their activity would be a neutral structure. However, consumers of large amounts of electricity would find that their costs of doing business might rise and therefore put them at a competitive disadvantage in their industry.

Encourage Economic Development within the Electricity Industry. A system that imposes no taxes on businesses would pose no tax barriers to emerging businesses.

Broad Base. A system of taxation based only upon consumers would not be as broad as one that included business activity. A structure that did not include all consumers would be further narrowed, resulting in higher tax rates for those remaining in the base.

Stability. Because electricity can be considered a fundamental necessity and a certain amount of electricity can be predicted to be consumed regardless of the economy, a tax on this commodity would probably be more stable than in the retail economy in general.

Cost of Compliance (Taxpayer). Experience with the retail sales tax indicates that collection of this tax imposes some burdens on businesses for which they are minimally compensated. The

[50] A reverse index is one in which the tax rate declines as tax incidence increases. For this option, the tax rate would be scaled to decrease as consumption of electricity increased.

administrative costs of remaining informed about the applicable tax rates and segregation of receipts impose differential burdens on businesses of different sizes.

Cost of Compliance (Government). The administrative structure required to monitor and enforce the retail sales and use tax is significant. However, after initial startup expenses, the system could operate similar to the current structure.

Stakeholder Comments

One stakeholder commented that an option to not tax the businesses in the electricity industry would favor an industry that causes significant environmental harm and that such an option would move in the opposite direction from the principle of making polluters pay and putting the tax emphasis on industries damaging to the environment. Other stakeholders mentioned the potential economic development benefits of no business activity tax on electricity.

6.7 A "Public Purposes" Based Structure

There has been considerable discussion among policymakers since the mid-1990s that the environmental and social issues presented by the transitions in the electricity industry in our region need to be addressed comprehensively. In this context, the phrase that has been adopted to characterize many of these concerns is "public purposes." Public purposes mean those conservation, renewable resources, and low-income services necessary to provide a well-rounded and sustainable energy program. Therefore, another option would be to construct a comprehensive system of taxation that has enough mechanisms to be readily adjustable to public policy concerns. Business taxes like the PUT and B&O would be applied to business activities in the industry with certain businesses receiving differential treatment. Retail sales and use taxes would be applied to consumers with certain classes receiving exemptions or credits based on public policy goals. Local options could be authorized to meet the needs of communities. Under this structure, many specialized taxes and exemptions could be constructed to cover many different aspects of the market and the desired public policy.

Examples of tax options that are public purpose based include the following:

- Sales and use tax exemptions for construction of renewable energy sources.
- Specific "polluters pay" taxes such as a tax on hydro generation or a carbon tax on the use of carbon producing fuel.
- Sales and use tax exemptions for construction of salmon restoration on dammed waterways.

Criteria

Avoid Revenue Loss. Revenues could be maintained by shifting obligations within the tax base. To the degree that policy preferences change and the shape and nature of the industry changes, the revenue stream will require monitoring to maintain consistent revenue levels.

Promote Competitive Neutrality. A system of taxation that rewards certain types of activity and discourages other types of activity would not be competitively neutral.

Encourage Economic Development within the Electricity Industry. Due to the broad base of this option, it is possible to use the tax structure to influence the industry and consumers through the use of specialized tax treatments. To the degree that preferential tax treatment of certain activity stimulated participation in that portion of the market, an economic development incentive can be said to take place.

Broad Base. This option could be conceived as a very broad system, which would include all elements of the market.

Stability. The stability of the tax structure and revenue stream would be directly related to the efforts policy makers placed on establishing firm rates and unavoidable obligations. By having a broad base, this system could be stable generally, while individual components may vary with public policy preferences.

Cost of Compliance (Taxpayer). Differential rates and taxes based upon types of activity are the most complicated taxes to comply with. Staying informed on tax changes based upon changing legislative policies is challenging from a business point of view.

Cost of Compliance (Government). The administration and enforcement issues raised by the multiplicity of tax treatments poses serious costs to an administering agency.

Stakeholder Comments

One stakeholder pointed out that a tax structure that imposes unique taxes on in-state producers would penalize them as compared with out-of-state producers. Another commented that the value of conservation and renewable resources is only available to the consumer when used in conjunction with a reliable power system, and that special purpose exemptions as incentives for "clean" power do not sufficiently assure reliable power.

6.8 Business Activities/Consumption Tax Structure

This structure would eliminate the PUT. Revenues from generation, wholesale sales, and retail sales of electricity would be taxable under the B&O tax rates for manufacturing, wholesaling, and retailing respectively. City B&O taxes would apply at rates generally not to exceed .2%. (B&O tax would not apply to electricity exchanges made for reliability purposes.) Impose a state retail sales tax or use tax on sales of electricity for consumption; allow local options (city and county) in addition to any dedicated sales tax authorized and imposed in that jurisdiction.

Features of options that may help meet the criteria include the following:

- Eliminate the wholesaling tax.
- Allow a residential sales and use exemption on electricity similar to the exemption allowed for residential telephone service.
- Reverse index use tax rate to mitigate impact to DSI and other users of significant amounts of electricity.

Criteria

Avoid Revenue Loss. This option can be designed to be revenue neutral and as such would meet this criterion. However, under this structure consumers might experience tax levels different from what they currently face. In order to mitigate that possibility, reverse indexes for consumers of large quantities of electricity and a residential exemption could be employed. Both of these variations reduce this option's ability to remain revenue neutral.

Promote Competitive Neutrality. Factors in this option that contribute to satisfying this criterion include a generally lower tax obligation on business and more equal treatment for similarly situated businesses. Factors that detract from satisfying this criterion include the loss of the exemptions for interstate and intrastate sales for resale; these exemptions promote a level playing field in interstate commerce.

Encourage Economic Development within the Electricity Industry. This option treats the electricity business similar to other businesses in Washington compared to the industry's current tax treatment as a regulated utility. Consequently, the electricity industry would face no greater or lesser competitive pressures by reason of taxes than do other Washington businesses.

Broad Base. This option increases the base by imposing a sales and use tax on consumers. Any alternative that exempts specified consumers would narrow the base.

Stability. The option offers stability to the extent production, sales, and consumption of electricity remain steady and predictable.

Cost of Compliance (Taxpayer). Experience with the retail sales tax indicates that collection of this tax imposes some burdens on businesses for which they are minimally compensated. The administrative costs of remaining informed about the applicable tax rates and segregation of receipts impose differential burdens on businesses of different sizes.

Cost of Administration (Government). After initial implementation costs, this option meets this principle.

Stakeholder Comments

Stakeholder concerns regarding this option parallel the concerns expressed regarding the business activity option. That is, some stakeholders are very concerned about the economic implications of imposing taxes on wholesale (sales for resale) transactions. Their perspective is that a tax on wholesale transactions will increase the cost of power, could ultimately make Northwest power non-competitive with energy produced in other regions, and propose it is not necessary to achieving the stated principles of the report.

6.9 Conclusions

The study team offers no conclusions or recommendations regarding the options for change discussed in this report. The direction to the study team does not call for recommendations nor consensus of the study participants. We offer this matrix for the purpose of comparison. A

checkmark indicates that the option allows a range of possibilities for meeting the indicated criterion. An "X" in a column indicates that the option is less successful in meeting the criterion.

Options Matrix

	Revenue Loss	Competitive Neutral	Economic Develop	Broad Base	Stable	Ease of Compliance (TP)	Ease of Compliance (GOV)
Business Activity based	☒	☒	☒	☒	☒	☑	☑
Consumption based	☒	☑	☑	☒	☑	☒	☑
Public Purposes	☑	☒	☒	☑	☒	☒	☒
Business/ Consumption	☑	☑	☑	☑	☑	☒	☒

Each of the structures briefly described in the preceding sections could be modified to accommodate multiple policy choices. For example, taxes could be based on value, such as gross receipts from transactions, or volume, such as kilowatt-hours. None of the options as described in this report should be considered the best or only way to structure a tax system. Further analysis of specific policies and goals in the context of the wider circumstances of the state's citizens and businesses is essential.

APPENDIX A

Categorization by entity of the 78 businesses that pay electricity public utility tax:

Mutuals and Co-ops:

ALDER MUTUAL LIGHT CO
BENTON RURAL ELECTRIC ASSN.
BIG BEND ELECTRIC COOPERATIVE INC
CLEARWATER POWER CO
COLUMBIA RURAL ELECTRIC ASSN. INC
ELMHURST MUTUAL POWER & LIGHT COMPA
HILLCREST VILLAGE WATER CO INC
INLAND POWER & LIGHT CO
KOOTENAI ELECTRIC COOPERATIVE INC
LAKEVIEW LIGHT & POWER CO INC
MODERN ELECTRIC WATER CO
NESPELEM VALLEY ELECTRIC COOPERATIVE
OHOP MUTUAL LIGHT CO
OKANOGAN COUNTY ELECTRIC COOPERATIVE
ORCAS POWER & LIGHT CO
PARKLAND LIGHT & WATER CO
PENINSULA LIGHT CO
TANNER ELECTRIC COOPERATIVE

Water and Irrigation Districts:

ANNAPOLIS WATER DISTRICT
OLYMPIC VIEW WATER DISTRICT 1
SAMMAMISH PLATEAU WATER & SEWER DIST
VERA IRRIGATION DIST 15

Investor-owned Utilities:

AVISTA CORP
COLOCKUM TRANSMISSION COMPANY INC
PACIFICORP
PORTLAND GENERAL ELECTRIC/CENTRALIA STEAM PLANT
PUGET SOUND ENERGY INC
WEYERHAEUSER COMPANY

Federal Entity:

BONNEVILLE POWER ADMINISTRATION

Cities and Towns:

CITY OF BLAINE
CITY OF CASHMERE

CITY OF CENTRALIA
CITY OF CHENEY
CITY OF CHEWELAH
CITY OF ELLENSBURG
CITY OF EPHRATA
CITY OF MCCLEARY
CITY OF MILTON
CITY OF OAK HARBOR
CITY OF PORT ANGELES, Light Dept.
CITY OF RICHLAND
CITY OF SEATTLE
CITY OF SUMAS
CITY OF TACOMA
TOWN OF COULEE DAM
TOWN OF EATONVILLE
TOWN OF FIRCREST
TOWN OF RUSTON
TOWN OF STEILACOOM
TOWN OF WATERVILLE *

Port Districts:

PORT OF SEATTLE
PORT OF SKAGIT COUNTY
PORT OF TACOMA
PORT OF VANCOUVER

Public Utility District:

PUD #1 ASOTIN COUNTY WASHINGTON
PUD #1 BENTON COUNTY
PUD #1 CHELAN COUNTY
PUD #1 CLALLAM CO
PUD #1 CLARK COUNTY
PUD #1 COWLITZ COUNTY
PUD #1 DOUGLAS COUNTY
PUD #1 FERRY COUNTY
PUD #1 FRANKLIN COUNTY
PUD #1 GRAYS HARBOR COUNTY
PUD #1 KITTITAS COUNTY
PUD #1 KLICKITAT COUNTY
PUD #1 LEWIS COUNTY
PUD #1 MASON COUNTY
PUD #1 OKANOGAN COUNTY
PUD #1 PEND OREILLE COUNTY
PUD #1 SKAMANIA COUNTY
PUD #1 SNOHOMISH COUNTY
PUD #1 WAHKIAKUM COUNTY
PUD #1 WHATCOM COUNTY

PUD #2 OF PACIFIC COUNTY
PUD #2 OF GRANT COUNTY
PUD #3 OF MASON COUNTY
WPPSS/Energy Northwest

*** In August of 1997 the Town of Waterville sold its light and power business.**

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9. Washington Administrative Code.

Court Cases

1. PUD No. 2 of Grant County v. State, 82 Wn.2d 232 (1973).

2. Tenaska Washington Partners, LPII v. Department of Revenue, Thurston County Superior Court, Case No. 94-2-02601-9 (1994).

3. Tyler Pipe Industries, Inc. v. Washington Sate Department of Revenue, 483 US 232, 250-251 (1987).